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ART IN THE WESTERN WORLD

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AUTHORS' PREFACE

IN WRITING this book, the authors have hoped to fill in some measure the need that exists for a discussion in relatively non-technical terms of the artistic tradition of the Occident. It is intended for those with an interest in art and who seek an adequate discussion of it, expressed in terms intelligible to the general as well as the professional reader. In trying to meet this need to some extent, the authors have dealt with the art of the western world alone, not only for the better result that might come from limitation but also because non-European styles are better understood with a field of reference in the art of the West, at least insofar as Occidental observers are concerned.

For the most part, an historical approach to the material involved has been maintained, for without understanding of the continuity of the Occidental artistic tradition, much of its significance is incomprehensible. At the same time, it has been considered advisable to present the material under the general categories of architecture, sculpture and painting instead of considering the entire artistic style of a given period as a unit. The latter approach, it seems to the authors, very frequently results in failure to grasp the essential characteristics of the individual arts. It is the hope of the authors that they have made clear to some extent the distinction between the various arts, not only as regards the material points of difference, in mediums, forms, etc., but also the manner in which their development has been affected by virtue of distinctions which have appealed in varying degrees to the succeeding civilizations of the western world. While believing that the foregoing method of approach is one whose value has not yet been fully appreciated, the authors have also tried to provide the means of using the book in the more traditional manner, as an exposition of the chronological development of entire periods, in the topical table of contents wherein the material pertaining to a given period can be found.

In a book of such extended scope, it may seem at first glance that an unduly large amount of space has been given over to discussion of art since 1800. If art is to be studied only in terms of

abstract formal qualities, such criticism would be valid. When, however, it is approached as corollary to the development of thought and civilization, as a commentary upon experience, as a reflection of life itself and a statement of those things and ideas which are held to be true and significant, then it cannot be denied that from the point of view of the man of today, modern art must be given a prominent place in such a discussion as that here attempted. To state that opinions concerning contemporary art must be tentative is a truism, but it is the feeling of the authors that the very complexity of modern art demands that it should receive proportionately ample treatment, and, though they are conscious of the transitory value of much of it, they have attempted to extract from the contemporary scene those things which apparently represent it in most characteristic fashion. In trying to apply to modern art the same methods as those followed in considering the art of past civilizations, namely by pointing out the qualities which seem best to reflect contemporary experience, the authors are merely maintaining that art is no less vital today than in the past.

A book such as this can be written and produced only with the disinterested cooperation of many individuals. The authors wish particularly to express their gratitude to the following who have generously made available much of the illustrative material that has been employed:

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The sections on architecture and sculpture were written by Mr. Robb; that on painting is by Mr. Garrison with the exception of

the chapter on Painting before 1300 which was written by Mr. Robb and the introductory chapter on Principles and Technique which is collaborative.

D. M. R.

J. J. G.

FOREWORD

It is not easy to compress within the pages of a handbook such as this the vast panorama of art, even with the limitation, implied in the title, to the "western world." The history of art is perhaps the most comprehensive of the humanities, in that for its understanding the student must have continual recourse to the other expressions, of literature, philosophy, and politics. Its monuments and examples, also, are innumerable and infinitely varied, so that selection thereof for the illustration of what is typical and really significant is far more difficult than in collateral fields.

The authors of this survey of art in the western world have been, in the opinion of the writer of this foreword, unusually successful in such selection, and have made clear, within the limits imposed by the brevity of their treatment, the cultural movements that lay behind the changes in artistic style. Particularly is this the case in the lucid opposition which they have established through their outline of western art, between the medieval and modern apprehension of experience through the particular to the general, and the antique attitude that conceived it intellectually as ideas. A result of this is the sounder estimation of the Renaissance and subsequent periods which seems to be present in the authors' minds, as centuries of interaction and conflict between a native European realism and a yearning for order and clarity which was only artificially achieved through the resurrection of the classic point of view.

The teacher of the history of art will welcome, and the general reader will probably also appreciate, the division of the treatment into the headings of architecture, sculpture, and painting. This is good method, since it follows the sequence from relative simplicity to relative complexity. Architecture is the most abstract, intellectual, and therefore the most readily intelligible of the arts, and sculpture, sharing with it the candor imparted by the explicit third dimension, is but a step removed from it in clarity. One arrives thus at the subjective complication of painting with a complete picture of the artistic evolution already in mind, and with periods

and categories already established in the simpler modes that have preceded.

It is refreshing, too, to read simple objective language about art, as an inevitable element in experience, and therefore underserving of the extraordinary involution of thought and vocabulary which appears so often in modern criticism, apparently as an attempt to match the mysteries of much contemporary painting with an appropriate obfuscation. Such bewilderment is spared the reader of this brief book, which also avoids the commonest faults of handbooks on art-history, in that it is not a picture-book, nor the vehicle of a theory; it explains its terms and is no recital of unillustrated and too numerous facts.

C. R. MOREY

ART IN THE WESTERN WORLD

INTRODUCTION

WHAT is Art? Why does it have any importance in the lives of men? Of these two questions, the first has occupied the attention of thinkers since Plato wrote in *The Republic* of the place of artists in society. The second question is one that is peculiarly modern in its implications, for it has only been in the last few hundred years that Art required any explanation for its existence. It will be the purpose of this chapter at least to suggest answers to these questions, and it is hoped that they will make clear the attitude of the authors toward the material presented in the following sections of the book.

As a preliminary to answering the first question, let us consider some of the more generally accepted definitions of Art. That which has the widest acceptance as an answer to the question "What is Art?" is expressed by the *cliché* "I don't know anything about art, but I know what I like." Now this attitude brings out one very vital element in determining just what a work of art may be, namely that it must be judged according to its effect on the observer, hearer or reader depending on whether it is one of the visual, literary or musical arts. It is obvious that music which is not heard or a painting which is not seen can have no meaning except to the artist who created it. What this *cliché* does not take into account is of even more importance. In assuming that individual likes, or dislikes are grounds for judging a work of art, it is implied that the function of art is only to amuse or entertain, whereas it is actually much more significant than that, as will be seen shortly.

Another answer frequently encountered to the question "What is Art?" is that it is the representation of Beauty in a form that can be grasped through the medium of the senses. This formula too has in it an element which must be considered in a broad definition of our subject, for it is a part of the artist's task to reveal the beauty in his subject which is often unseen by others. The difficulty that arises when we say that art is the representation of the beautiful lies in the fact that there is no absolute Beauty. A Greek of the time of Plato and Aristotle would have

considered a tree heavily laden with snow as an object of no beauty, arguing that the snow destroys the characteristic shape of the tree. On the other hand, a Chinese artist would see in the same snowy tree a thing of magnificent splendor, basing his judgment on the fact that through its white mantle, the tree becomes an integral part of its setting. The *beautiful* varies so much from person to person, from time to time and from nation to nation that the term is without exact meaning.

A third definition of Art to be considered is that it is that form of expression of ideas which addresses itself most directly to the emotions. Like the others that have been mentioned, one of the important elements of a work of art is suggested by this definition, but again, it is not sufficiently comprehensive. Were the emotional reactions of the spectator the only thing to be taken into account, painting, architecture and sculpture could not be considered as important as poetry, music and the drama. The latter affect the emotions directly; the former rarely do so. Few if any pictures or statues can thrill us so immediately as the performance of a great play or symphony, yet we can hardly say that an engraving by Dürer is inferior as artistic expression to a fugue by Bach. We can only say that emotional appeal in and of itself cannot be considered as the ultimate ground for judgment of a work of art.

The three conceptions of art that have been mentioned all contain ideas that must be taken into consideration, but none of them are sufficiently broad. In trying to arrive at a more inclusive statement of the nature of an art work, let us examine the way in which an artist goes about the painting of a landscape. We have all had the experience of seeing a painting of a view with which we were familiar and of realizing, possibly for the first time, in the presence of the picture, just how beautiful the view was. Upon examining the picture carefully, we note that the artist has left out certain details of the landscape, and has made others more prominent than they seemed to us to be. This would seem to imply that he considered some things more important than others in his subject, that he has analyzed and evaluated them, and recorded in his painting the result of that analysis. Here is the first step in the creation of a work of art, the analysis by the artist of the experience which he has had of his subject. Now if we return to the painting, we shall observe that the artist has made the relationship of the various objects in the landscape to

each other more intelligible than they had seemed to be in the view itself. There is a continuity of space, the foreground leads into the middle distance and the background by carefully planned passages. This is because the artist has taken the forms which his analysis of the subject has proved to be the most significant ones and has created from them a new thing which has a reality all its own. His analysis is a process of taking his subject apart and evaluating its parts; then by a process of synthesis, he puts them together again to produce the work of art.

From the foregoing, let us attempt to arrive at a statement of the nature of an art work. It is the record in comprehensible form of the essential truth which the artist has felt in the analysis of his experience of life. It is the portrayal of truth which the artist feels, for his analysis of experience is an unconscious one, as well as the synthesis by which he makes clear the meaning of his analysis. It is this, and this only, that differentiates the function of the artist in society from that of the philosopher who is concerned with a conscious evaluation of human experience. The greatness of the artist depends upon the spontaneity and penetration of his analysis; the greatness of the work of art upon the completeness of the synthesis which is the record of the artist's reaction to his experience. The result of this entire process is a comprehensible symbol of the truth which the artist has felt, whether it be a poem, a statue or a musical composition. In the "Ode to a Skylark," the poet has given us a symbol of the liberating impulse that carries the mind far above thoughts of earthly things; in Praxiteles' Hermes, there is a symbol of the ideal human form that was divinity for its creator; in the Prelude to Tristan and Isolde, Wagner has wrought a symbol of the yearning passion of love. These symbols do not have meaning as intellectual analyses of experience, which are rather to be found in scientific treatises in the fields of psychology, religion and morals. Instead they are persuasive and immediately recognizable concepts of our most intimate experiences of religion, love and nature.

Closely allied to this definition of a work of art is the determination of the elements in it by which we are enabled to experience for ourselves the artist's analysis of his experience. Let us return again to the painter. If he is working on a portrait, our probable first reaction to it is that it does or does not resemble the person he is painting. Or if it should be a landscape, we may

feel that we are seeing the actual scene, if it is one with which we are familiar, or that this tree does not look right or that house is out of place. In other words, our reaction is controlled by the extent to which the artist has succeeded in representing the appearance of the thing he is painting. Representation is a very important element in art, particularly in sculpture and painting. From it we derive much of the pleasure that the visual arts can give, for recognition of the thing portrayed is one means by which the experience which the artist has recorded is made clear to us. By representing the objective characteristics of things, certain phases of the truth they symbolize to the artist are transmitted to the observer. But even though representation is a very vital factor in a work of art, it is not the only one. Were this the case the camera would be the greatest of all artists, for its lens can record the facts of appearance with a fidelity and accuracy far beyond the ability of the most painstaking painter. Other factors in addition to naturalistic appearance are involved in determining the significance of a work of art.

In tracing the method by which the painter produces the finished work, it was stated that one of the outstanding characteristics of an art work was the arrangement of its component elements so that they bear a definite relationship to each other. This arrangement is called the design. Design is as necessary in the visual arts as in the literary or musical ones. The laws that govern it correspond to the rules of rhetoric in writing or of harmony in music. Just as a sentence may be devoid of meaning through faulty grammar, so poor design in a work of art will prevent the observer from understanding the idea which the artist has attempted to symbolize. And much as a poem or a story, a building, painting or statue must have unity, coherence and emphasis. These are the qualities which the photograph almost invariably lacks; when they are present, the photographer is to this extent an artist. Their addition to the facts of appearance are essential if the result is to be a work of art and not merely a record.

The two elements of design and representation are the foundation of every work of art. In the synthesis of ideas which the artist achieves, they are balanced against each other in differing proportions depending upon the innumerable factors that go to make up his temperament. Here again the evidence of the artist's unconscious reaction to his experience appears very powerful.

and serves as an indication of the things which to him are the essential verity of that which he portrays. But at neither extreme, pure design or representation, is the greatest art to be found. If the emphasis is entirely on the formal arrangement or abstract design as in an Oriental rug, the effect is very decorative and may produce a momentary pleasure in the arrangement of lines and colors. But it possesses nothing by which it can be related to our own experience. It has no readily grasped symbols that correspond to our own knowledge of things. Everyone has attempted to trace images of trees and animals in wall-paper designs. This is a very natural reaction to a purely abstract pattern which we of the western world, at least, instinctively try to vitalize by connecting it in some way with things that are familiar to us. We feel that such a thing is not complete in itself. "Pure" abstract design is incapable of the universally understood meaning which is in great art. A statue by Braucusi (Fig. 235) or a painting by Braque (Fig. 360) is the tangible expression of personal experience that has been distilled and redistilled. Such works of art represent what the artists felt to be the only significant elements in the objects portrayed. But for one whose processes of comprehension are not exactly the same as those of the artist, an obvious impossibility, they must stand or fall by the appeal of their purely formal elements, color, line, mass, etc. They lack the relationship to our own experience which is essential if a work of art is to have meaning for us, and the formal qualities do not possess in themselves the sense of completeness which our experience demands.

At the other end of the scale from the Oriental rug is the photograph. In its record of the mere facts of appearance, we sense nothing of the timeless and characteristic qualities that reveal the human significance of those facts. Let us assume that two photographs of the same landscape were taken at different times under different lighting conditions. Each will record what was true of the scene during the infinitesimal fraction of a second at which it was made, but obviously the two "true" representations will be quite different from each other. It is the artist's business to correlate the facts they present, or better, to correlate his own innumerable observations of these facts. This correlation or synthesis he makes tangible in his painting, emphasizing the elements which he feels to be the basic and important ones and omitting those which are not essential. These elements will not be

the same for two artists; they may not even be the same for one artist at different times. But just so far as the artist is successful in analyzing his experience of the subject and in effecting a complete and unified synthesis of that analysis in his painting, just so far has he succeeded in creating a sufficient work of art. It is to achieve this end that he imposes a consistent, ordered and logical pattern upon the facts of appearance he portrays, by the design. If he is a truly great artist, the design will appear to be inevitable and inherent in the subject represented. His painting will have a reality of its own which is even more impressive than that of the original subject, for it will possess in its own right the symmetry, proportion and unity which Life itself appears to us to have in those rare moments of penetration when we are able to coordinate and relate the fragments of our experience into a coherent whole and thus come to a realization of its deeper meaning and our own part therein.

It has already been pointed out that the artist's analysis of the objective facts of his subject and the synthesis that he creates in his design are results of the unconscious working of his own temperament. A third factor which is frequently of importance in determining the significance of a work of art is its conscious meaning or subject matter. This is true of medieval European art, for example, which an Occidental cannot observe solely with an eye to the elements of representation and design for his reaction will be very considerably affected by his heritage of Christian faith. On the other hand, the art of the Orient will appeal to him only as he is sensitive to elements of representation and formal design, for the conscious meaning or religious element in it will hardly affect him at all. For this reason, the subject matter of art cannot be depended upon as a basis of judgement. A modern painter will portray a vase of flowers with the same intensity of feeling that his ancestor seven hundred years ago infused into a picture of the Crucifixion.

We have now arrived at a definition of art which is equally applicable to all its forms even though the discussion has been limited to hypothetical examples of painting. Art is the representation in comprehensible form of the truth revealed to the artist by his unconscious analysis of experience. From this, we can now proceed to the second question posed at the opening of the chapter, "What is the importance of art in the life of man?"

In answering this question, let us assume that we are standing before the portrait of a great man such as the marble bust of Voltaire by Houdon (Fig. 228). As we look at it, we observe the realistic manner in which the sculptor has portrayed the appearance of the man, the shrewd, penetrating eyes, thin lips, shaggy brows and the half-benevolent, half-cynical smile on the lips. We are then conscious of the way in which the details of the hair and the costume are subordinated, so that they do not distract attention from the face itself, even though they too are represented with great fidelity. But even though these details can be noticed after our initial reaction to the statue has been analyzed, the thing which stands out in our minds even more than they is that here is an embodiment of the idea of Voltaire himself. The elements of representation and design in the portrait do not exist as separate things for the observer, but are fused together in his mind. His experience is that of a complete identity which must mean Voltaire to him. Through Houdon's unconscious analysis of the nature of the man before him and his success in creating in tangible form a symbol of that man, we are permitted today to know for ourselves the character of the great French satirist. All that we may know of Voltaire is brought to a focus by this statue which henceforth stands for everything that he may mean to us.

Such an analysis of the infinitely complex relationship set up between the work of art and the observer as that in the foregoing paragraph is obviously open to criticism. That relationship is intangible and undemonstrable, varying with each observer. One will react more definitely to the objective appearance of the things portrayed; the elements of formal design will seem of greater importance to another. But even though the nature of the relationship between the observer and the art work cannot be defined, it is no less positive in effect. The representation of things, essential in the work of art, strikes a responsive chord in our own memories. We re-live the experiences of those things. But the artist goes farther than this, for by his design he relates the representative elements in an ordered and logical pattern, giving them greater meaning by that relationship. By availing ourselves of his analysis of experience through the synthesis of it that is the work of art, we ourselves are led to the observation of new truths or to re-affirm the validity of known ones by the light

thus shed upon them by genius. It is as a *human* experience giving direction and meaning to life that a work of art attains significance. The experience of beauty which is the result of complete understanding of an art work arises from the fact that through it, the reader, observer or listener feels his own life to be enriched, broadened and deepened.

ARCHITECTURE

CHAPTER I

ARCHITECTURE. PRINCIPLES OF DESIGN AND CONSTRUCTION

ARCHITECTURE is the only one of three visual arts which can be called practical in the generally accepted sense of the word. Sculpture and painting can be put to some practical use, it is true; much very effective advertising is made possible by them. But one of the primary purposes of architecture is to satisfy the fundamental human need for shelter, a need which is only next to the instinct for food among the ingrained desires of Man that are unconscious spurs to the preservation of life. It follows from this that architecture should be judged by the extent to which it fills the need that called it into existence. This same reason gives an explanation for the development of the many different styles of architecture that exist. The architectural needs of different periods in the history of the world and in different places have never been the same. The different styles were created to meet the varying needs that appeared, hence they themselves are quite different from each other.

The form of a given building is therefore determined to some extent by the purpose for which it was built, but this is not the only factor that enters in. The way that it is built is also a matter that has to be considered. In this aspect of architecture, there is a very close connection with the science of engineering and it is possible to trace the entire history of the art through the changes in form that have resulted from various methods of construction employed in different periods to assure stability and permanence in building. One of the most obvious illustrations of this fact is the modern skyscraper. Without the use of steel, the lofty towers of the modern American city could never have been erected. The element of construction thus plays a very important part in determining architectural form, but in general, it is subordinate to function in that capacity. The skyscraper would hardly have been developed without the urban congestion that made it neces-

sary, and some of the first tall buildings were built entirely of masonry.

In architecture, function and construction correspond to the element of representation in the esthetic theory developed in the Introduction. The purpose for which a building was erected is usually quite clear. The method of construction that makes it stable and permanent may not be so easily observed, but it too can be seen. In other words, the function of the building and the method by which it is built are the facts with which the architect has to deal. They correspond to the facts of appearance with which the painter and sculptor are concerned in their respective arts.

Now if the theory developed in the Introduction is to hold good for architecture, it should follow that great architecture does not result merely from good construction and efficiency in fulfilling the purpose for which it is intended. Great painting and sculpture do not consist of representation alone; no more does a well-constructed building which is functionally perfect thereby become a work of art. A garage which is well adapted to its purpose and capable of standing for centuries is not necessarily great architecture. A railway station may serve admirably as the modern gateway to a city; it may have done so for years and be capable of doing it for many more, and yet fall short of architectural distinction. In both cases, this is true if the significant element of design is lacking. Design is quite as important in architecture as in the representative arts, and its purpose is the same in both categories. In architecture, it imposes order upon the functional and structural facts with which the architect has to deal. It relates them to each other, and out of the clarity and logic of that relationship, there emerges the beauty for which the architect strives. It is design that makes the difference between great architecture and buildings that are merely tools for living.

The final importance of a given example of architecture depends on the degree to which the three basic elements of design, construction and function have determined its form. It has been pointed out in the Introduction that great art is not formed of design or representation alone, but in a just balance between them. This is as true of architecture as of sculpture and painting. The function of a building and its mode of construction should both be clearly expressed by the design. In addition, it will possess an intrinsic beauty of form that will appeal to the observer in its

own right. Its different parts will be related to each other in a manner that seems right and inevitable, and the resultant beauty of form will be expressed in terms of the function of the building and its construction.

In actual architectural practice, both extremes are found. Much has been heard of late of the "functional" style of architecture. It is that produced by architects who believe that "form follows function." This means that if a building is well constructed and discharges the purpose for which it was erected with the greatest possible efficiency, it will have a certain intrinsic beauty of form. At the opposite extreme from this theory is the one which holds the appearance of the building to be the thing of greatest importance in determining its design. According to it, design is a thing apart from the function of the building, and all that matters is to establish a satisfactory if abstract relationship between the various parts of the design. From this point of view, beauty is a thing which can be applied to a building instead of being latent in its design and construction.

Each theory fails to take into account some fundamental of architectural experience. The Functionalist theory is too intellectual. Regardless of how sure the observer may be that the filling station on the corner is well built and efficient in the discharge of its function, he feels the lack of coordination of its various parts which should be supplied by good design. At the other extreme, the skyscraper surmounted by a Greek temple fails to attain greatness because the design does not take function and constructive methods into account. There is no unity in it for what is known of the premises for the existence of the building is not borne out by its appearance.

Architecture is thus dependent for the expression of ideas upon the same factors that appear in the representative arts of sculpture and painting. Great architecture is produced when the elements of function and construction are integrated by the design, and thereby acquire a meaning that lies outside themselves. The resulting experience of beauty on the part of the observer comes from his comprehension of the synthesis achieved by the architect of those three basic elements. His intellectual comprehension of the facts of the building is transmuted by the design into the emotion connoting beauty. To undergo this experience in the presence of the Parthenon or the Cathedral of Amiens, to grasp

their complete meaning, is to be awakened to a deeper, more profound understanding of the meaning of Life itself.

Certain points will now be considered that are concerned with architecture as an individual art, points that arise in connection with the material used in building and the constructive methods involved. Various materials have been employed for building, differing according to period and region. Stone and wood have been in use since the earliest times. The former was preferred in monumental building for the obvious reason that it was more permanent. It was employed with mortar and also with live joints, *i.e.* with no binding medium to hold the blocks together. Brick has also been in use from the earliest periods, the first examples being sun-dried, for the practice of baking brick in kilns is of comparatively recent origin. Concrete was first used on a large scale by the Romans, and then only when considerable amounts of stone could be introduced into the mixture. From the 19th century to the present, steel and iron have been used in large quantities, either in the form of structural beams or as reinforcement in concrete in which case the medium is known as ferro-concrete. Terra-cotta has also been used a great deal in architecture but chiefly as a decorative or protective substance. Three mechanical principles are involved in architectural construction, the post and lintel, the arch, and the cantilever. Of the three, the post and lintel is probably the oldest although some very early examples of arch construction have been found. The cantilever has been used extensively only with the advent of steel as a medium of construction, although it occurs in certain types of wooden roofs in the medieval period.

The nature of the post and lintel system is implied by its name (Fig. 1). It consists of two vertical members supporting a horizontal one, a common example being an ordinary door frame. It is the simplest of the constructive principles in application. The vertical members need only be strong enough to support the weight of the lintel resting on them. Even if some additional weight is placed on the lintel, such as that of the wall over a door, there is no threat to the stability of the system if the space between the vertical members is not too great. There are, however, certain inherent disadvantages in the post and lintel system. One of these appears if the construction is of stone, particularly if the posts are far apart. A stone beam of more than a certain length

in proportion to its thickness will snap in two of its own weight if it is supported only at the ends, a possibility which becomes even more probable if some weight is placed on it. Another disadvantage of the post and lintel system is its liability to destruction through shearing. This phenomenon also occurs if the lintel is subjected to pressure from above, when the end of the horizontal beam may be pinched off. Reference to the diagram (Fig. 1) will show just where this may occur. It is particularly likely to happen if the lintel is of some material that is not tough enough to

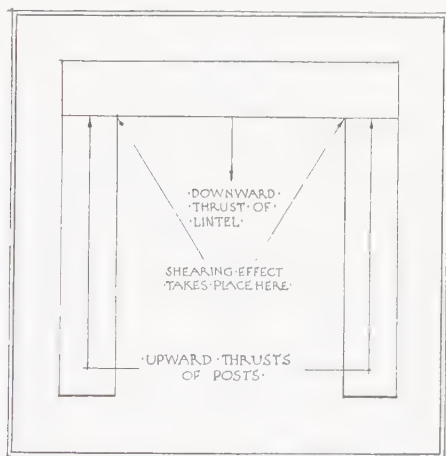


FIG. 1.—THE POST AND LINTEL.

withstand the strain created under the conditions described. The disadvantages of the post and lintel system that have been mentioned are minor ones, however, and it is the most frequently employed of the three constructive systems. It occurs even in modern buildings with steel frames which consist largely of beams fastened together to form post and lintel units. It is the simplest in application of the three systems, its structural effect is easily observed, and it can be used to great advantage in a style which does not depend for effect upon large openings and unobstructed spaces.

The second constructive principle is the arch (Fig. 2). The wedge-shaped blocks that form the curved portion are known as voussoirs, the topmost one being further distinguished as the key-stone. The lower faces of the bottom ones on each side are the

imposts, and they rest on the springings. The inner and outer edges of the arch are concentric sections of circles, the outer one being the extrados and the inner one the intrados or soffit. The haunch comes midway between the crown of the arch, at the keystone, and the impost. As in the post and lintel system, the arch presents certain mechanical difficulties. In the first place, it has to be supported by a scaffold or centering until it is completed. This is usually in the form and size of the opening which the arch is to enclose when completed. The voussoirs are laid upon

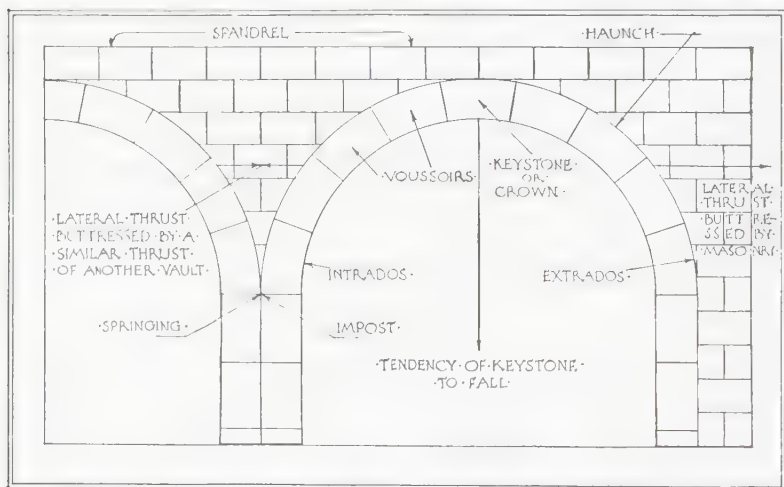


FIG. 2.—THE ARCH.

it and when they are locked in place by the keystone, the centering is removed. But if the arch were then left, the most serious disadvantage of the system would immediately become apparent. The keystone would fall to the ground and the system would collapse. If its sides were parallel instead of divergent from the center of the arch, this might very easily happen. As it is, it can happen only if the sides of the arch are forced out far enough to permit the wide end of the keystone to pass through. This the weight of the keystone itself tends to do, exercising through the pressure of the divergent sides against the voussoirs, an outward, horizontal force or thrust. This horizontal thrust is always present in an arch and is a constant menace to its stability unless properly

compensated by means of buttressing. There are several ways in which this can be done, the basic principle of all being the opposition to the horizontal thrust of another force of equal strength, thus neutralizing it and establishing an equilibrium. At the right end of the diagram (Fig. 2), the opposing force is the dead weight of the wall which smothers the horizontal thrust by shear inertia; at the left end the thrust is offset by the similar one of another arch. In both cases, the compensating force is applied at the haunch of the arch where the thrusts are the strongest. At the left end, the two opposed thrusts are brought together by filling the triangular space between the arches, known as a spandrel, with masonry. A series of arches united in this way is called an arcade.

From the foregoing, it is clear that the very nature of an arch is such that it contains in itself a force which can disrupt it. To be stable, an arch must depend upon the external force of buttressing. This disadvantage is of minor importance, however, in view of the many advantages of the arch system. For one thing, an arch can be built of stone which is not good enough to cut in blocks large enough to serve as lintels. Moreover, an arch can be built with relative ease over a space that could be spanned by a straight lintel of stone or wood only with great difficulty. Even if an arch is required to support a weight, other than its own, it is only necessary to provide additional buttressing for the increased horizontal thrust.

The third constructive principle, the cantilever, has come into general use largely as a result of the use of steel as a medium of construction. Its formation and method of operation can be understood if a vertical beam of steel is visualized, set solidly in the ground, with a horizontal beam bolted to it by one end. Now if a weight is hung from the free end of the horizontal beam, it will actually be supported by the vertical beam, even though it is separated from it by the length of the horizontal one. This is the cantilever principle as applied to modern construction. Its stability is due to the successful resistance of steel to forces that twist or bow it, forces which would split wood, for example. Although the cantilever was involved in the wooden hammer-beam roofs of the Middle Ages, its value as a constructive principle has been chiefly realized since the advent of steel as an aid to building. Just what that value is can be seen in such buildings as the Robie

House in Chicago (Fig. 128) and the Philadelphia Saving Fund Society Building (Fig. 137). In the former, it makes possible the unobstructed view from the porch whose roof is supported by cantilevers instead of posts. In the latter, the continuous horizontal bands of windows admit light to the interior without any of the dark shadows created by the supporting corner posts and dividing walls that usually appear in commercial structures. They are made possible by the cantilevered floors which are supported by interior vertical beams instead of by posts at the outer edge as would be the case if it were an example of post and lintel construction.

The importance of constructive methods as elements in the formation of architectural style is indicated by the fact that until the closing years of the 19th century, the effect of any given building was largely determined by the constructive principle it embodied. The choice was limited, but the effects made possible were widely divergent in aim and character. The decision between arch or post and lintel usually depended upon the attitude toward one of the fundamental problems in architecture, the treatment of space. Architecture is essentially the art of handling space. Whatever the specific function of a building, temple, house, or place of business, its primary reason for existence is to isolate the physical space it occupies so that it may be used for that purpose. It follows that from the observer's point of view, the primary experience of the building must be one of space, and the nature of that experience will depend on the way the architect has treated it. This varies with each style and period, according to the different modes of thought in the many civilizations that have risen and fallen in the history of the world. Greek thought was primarily objective and concrete; it avoided the abstract, and as a result, there is practically no concept of space in Greek art. Greek architecture is based entirely on the post and lintel system; it deals exclusively with the exterior effect of the building and emphasizes its concrete form (Fig. 6). By contrast, thought of the 13th century or the High Gothic period was abstract; the architecture that symbolizes it is one in which concrete form appears to dissolve into space. This effect is attained largely by the use of the arch as a constructive principle and is best realized in the interior of a Gothic cathedral (Fig. 59). In contrast with both

Greek and medieval thought, that of the modern world is analytical. It attempts to isolate the essential in everything, whether it be an abstract principle or a concrete form. In architecture, the result is an emphasis on both space and form as individual things, clearly interacting yet always separate. The seeming lack of a great modern style is because this quality has not yet acquired the integration that gives it authority and significance.

Of all the art forms, architecture has the greatest social significance. Bad pictures can be painted but they do not have to be seen; bad poetry can be written but no one is required to read it; bad music can be composed but it does not have to be performed or heard. But it is impossible to reject bad architecture in the same way. If houses that are well planned and comfortable are not built, uncomfortable and inefficient ones have to be used. Once an ugly office building is erected, it is there and cannot be ignored. It follows from this that both the architect and his patron have a duty to Society that is of far greater importance than the embodiment of an individual ideal of beauty on the one hand or the satisfying of personal whim on the other. Until this obligation is recognized, it will be impossible for architecture to attain a beauty comparable to that of the great styles of the past, produced during those few periods in which Man's thought and expression were collective and consistent.

CHAPTER II

ARCHITECTURAL ORIGINS AND EARLY FORMS

PRIMITIVE man found protection from the elements in natural caves. It would not be right, however, to consider those caves as the first examples of architecture for the reason that they provided their inhabitants with shelter, for they did not owe their form to any human creative instinct. The first known examples of building in the Occident are the dolmens which appear in many parts of Europe, particularly in Brittany. A dolmen consists of two large vertical slabs of stone supporting a third horizontal one. It thus represents an application of post and lintel in the simplest form. Just what the purpose of the dolmen was cannot be determined, but it is believed that they served as sepulchral monuments for their Stone Age builders.

A more developed form is seen in the cromlech which also appeared during the Stone Age, though somewhat later than the dolmen. The most important example of the cromlech is *Stonehenge*, near Salisbury in England (Fig. 3). It consists of two concentric circles of upright stones, the vertical members being connected by horizontal lintels. Inside the outer circle was a large block of stone which probably served as an altar in some prehistoric religious rite. This idea was suggested by the discovery that at one time, the rays of the rising sun on the morning of the vernal equinox fell directly upon the stone, passing between the easternmost pair of uprights. The entire structure was very likely a shrine dedicated to the sun.

Stonehenge represents a considerable advance over the more primitive dolmen. It is more impressive in effect, owing to the relationship of a number of post and lintel units to each other in a definite order, as contrasted with the isolated dolmen. Stonehenge was also planned with some reference to its surroundings as is shown by the pointing of the main axis toward the east. Furthermore, it should be observed that the motive leading to the creation of both dolmen and cromlech was a religious one.

In the dolmen, it was a desire to preserve the earthly shell of the departed spirit; in the cromlech, it was to pay homage to the life-giving sun. In the very earliest times, the religious impulse was foremost among the motives leading to architectural construction. Many centuries were to elapse before Man felt that the shelter for his own body was worthy of distinction equal to those of his soul or of the gods.

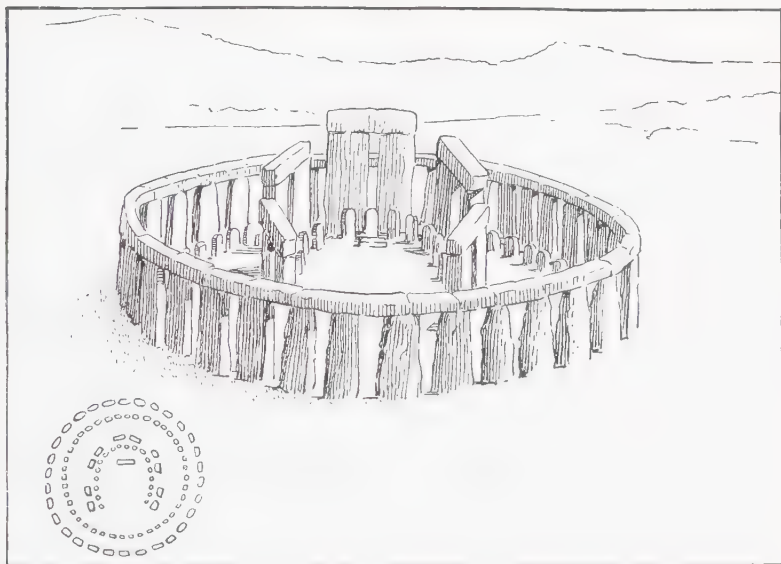


FIG. 3.—STONEHENGE. NEAR SALISBURY, ENGLAND. (RESTORED BY HARTMANN.)

This is also the case in the earliest architecture of historic times, that of Egypt. It consists almost entirely of tombs and temples, and the post and lintel system is used almost exclusively although the arch principle is occasionally found in utilitarian structures such as storerooms. In the world-famous Pyramids, the burial monuments of Egyptian royalty, which were built about 2800 B.C., the post and lintel type of building is found. It is even more obvious in the great temples erected along the banks of the river Nile.

The temple of *Phile* (Fig. 4) is typical of the Egyptian religious

structure. The building is entered through a portal cut in a massive wall or pylon, which leads into an open court. One or more sides of this court might be lined with columns as at the right of the illustration. From this court, a doorway in a second pylon leads either to another court or into a large covered space in which numerous columns support the roof. This is the hypostyle hall, the place in which public ceremonies were held. Doors leading out of the hypostyle hall give access to the rear of the temple, to the sanctuary and the many rooms in which the apparatus essen-



FIG. 4.—TEMPLE OF ISIS, PHILÆ.

tial to the religious rites were stored. A characteristic feature of the Egyptian temple plan is its single axis, dividing the length of the building into two equal, symmetrical parts. Whenever it was found necessary to enlarge the structure, it was usually along this axis, although in some of the larger temples, other axes are found which are subordinate to the main one and usually at right angles to it.

The post and lintel system is clearly shown in the illustration. It appears in a straightforward and simple form, the only refinement being the addition of a capital to the upright members. The capital is the swelling out at the top of the column, and is

usually decorated in Egyptian buildings. A common form is seen in the courtyard of the temple at *Medinet-Habu* (Fig. 5) where the capitals resemble inverted bells. The purpose of the capital is to improve the appearance of the column by enlarging its supporting surface and thus giving it the semblance of greater strength. Without it, there would be a sharp contrast between the vertical of the column and the horizontal of the lintel, and the former would seem incapable of bearing the weight resting on it.

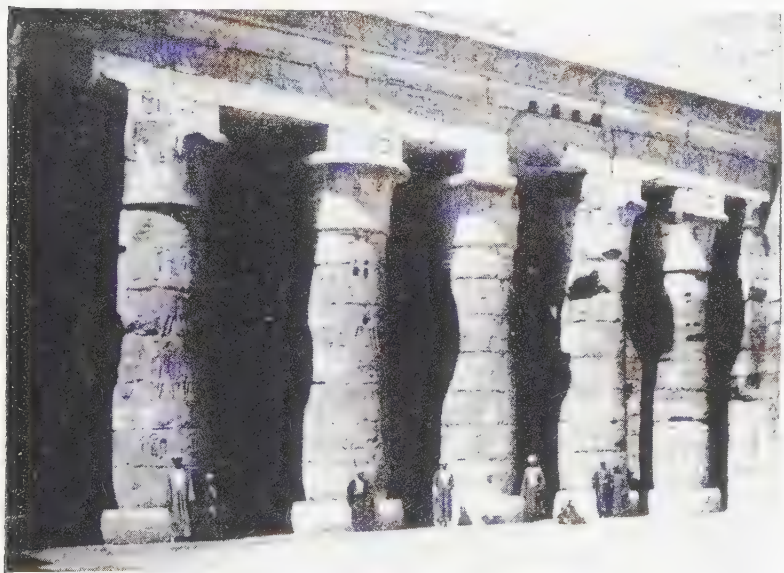


FIG. 5.—TEMPLE OF AMON, MEDINET-HABU.

The capital softens this contrast and gives the column the appearance of greater strength in so doing.

Other decorative elements should be noted in the illustrations. At the top of the pylon at Philæ (Fig. 4) there is a pronounced horizontal projection with a somewhat smaller one a short distance below it. At Medinet-Habu (Fig. 5), the lintel is crowned by a concave member that projects forward. Such horizontal projections as these are called mouldings and when they occur at the top of a building, as at Philæ, they are further distinguished as cornices. The purpose of the cornice is two-fold. It carries drip-

ping water away from the wall or column beneath it, and thus protects the latter from staining and erosion. Its second function is to bring the vertical continuity of the design to a close. It is the period to an architectural sentence. Its absence would impair the unity of the composition for it would not seem to be complete under such circumstances.

The carving that appears on practically every available surface of the Egyptian temple is another of its characteristic decorative features. It usually portrays the military exploits of the monarch who erected the building or celebrates his pious devotion to the gods. At Philæ (Fig. 4) the two images beside the door are deities. To the left is a huge figure representing the Pharaoh, attacking his enemies from whom he is protected by the hawk symbolizing Horus. In the upper level of the wall, he is seen paying homage to his divine patrons. Similar subjects appear at Medinet-Habu, carved in the pillars of the colonnades and explained by hieroglyphic inscriptions which play an important part in the decorative scheme.

From the point of view of the observer, the effect of an Egyptian temple is one of great power and strength. From the outside it is a long, low mass which merges into the flat horizontal lines of the Nile landscape. Few openings appear in the heavy walls, which seem to offer impregnable defense for the sacred objects within. This effect is the result of a predominance of solids over voids in the composition, that is, the masses of masonry make up the greater part of the design when their relationship to the open spaces between the columns, of doorways and windows, etc. is considered. This is true of all Egyptian architecture, and as a result, there is in it almost no suggestion of space. An extreme example is seen in the Pyramids; there is clearly no interior space within their huge forms, nor is there any relationship between the exteriors and the space around them. The same is true of the temple. In the open courtyard (Figs. 4 & 5), the ponderous pylons and the massive pillars are the most important elements of the design. It is their weight and bulk that is felt, rather than the space in the court itself or the openings between the columns. This effect is emphasized by the carved ornament which calls attention to the surfaces of the pylon and the columns, and away from the openings. In the covered portion of the temple, the massive columns are barely seen in the dim light that enters

through small windows. The resultant effect is one of mystery and awe, for the spectator, overpowered by the sheer size of the columns, feels his spiritual insignificance before the god whose power they symbolize.

In Assyria and Persia, an architectural style was developed almost at the same time as that of Egypt, also based on the post and lintel. The arch was used occasionally and also the dome, a development of the arch, but columnar effects were most frequently sought after. Among the monuments that have been preserved, tombs are the most numerous. Temples have also been found, but the most important type of building in Mesopotamian architecture was the palace. Worldly elements played a much larger part in Mesopotamian civilization than in that of Egypt, a fact which is reflected in the complex plans and varied effects of the palaces. Although the function of such buildings would naturally be very different from that of the Egyptian temple, the two were quite similar in effect, both being long and low and of very massive construction. In the Mesopotamian palace, huge fortification walls played an important part with occasional towers or ziggurats. These were pyramidal in form, and were usually built up in a number of clearly indicated levels. It was doubtless one of these ziggurats that inspired the Biblical description of the Tower of Babel.

The early architecture of the Ægean world, on the island of Crete and in the Grecian peninsula, was also of the post and lintel type. The descriptions of buildings in the *Iliad* and the *Odyssey* tell much of the nature of the style of this architecture which dates from approximately 3200 to 1100 B.C. On the mainland, need for military protection produced many fortified structures, but in Crete, isolated by the sea and protected by a navy, the palaces were open and unguarded. In striking contrast to the architecture of Egypt, that of the Ægean world was hardly affected at all by religious beliefs. These were very primitive and centered around the worship of Nature, symbolized by forms which are best described by the Biblical "stocks and stones." The only places of worship were small and insignificant rooms which were almost lost in the huge palaces whose plans were as complex as they were irregular. The most important factor in determining the plan of the palace, at least in such a one as the famous Labyrinth of King Minos at Knossos in Crete where the legendary

Minotaur was concealed, was consideration for living comfortably with the minimum of effort. Running water and concealed plumbing are generally thought to be entirely modern but they were known to the Cretan and appear in the Palace at Knossos in a form which differs from a 20th century installation only in the absence of the mechanical equipment which the architect of today has at his disposal. The only type of religious architecture that received monumental treatment in the Ægean world was the tomb. This is especially true on the mainland, where such a structure as the so-called Treasury of Atreus at Mycenæ attains great impressiveness by its size, good proportions and the enormous finely-cut blocks of stone employed in the construction. These form a corbelled dome, being laid so that each course or layer projects slightly over the one immediately below it, the projections coming together at the top of the opening to be spanned. This is not an application of the true principle of the arch since the only force involved is gravitation, and there are no horizontal thrusts.

Of the various architectural styles considered in this chapter, the Egyptian is the most impressive. The Mesopotamian architect was sometimes as concerned with the effect of his building as his Egyptian contemporary, but as a general rule, none of the other early architectural styles can compare in this respect with that developed in the Nile valley. Ægean construction often attained a picturesque effect through following the irregular contours of natural sites and well-designed decoration gave interest to the building. But the Egyptian was almost always successful in giving his tomb or temple the sense of grandeur and enduring power which tells more effectively than words the ideas he attempted to express. Because of this, the architectural style of Egypt was the first great one to be developed in the history of the world.

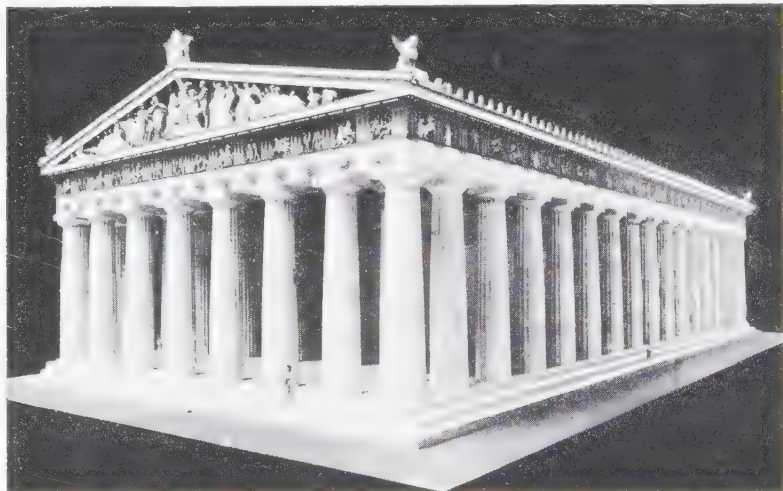
CHAPTER III

GREEK ARCHITECTURE

GREEK architecture, like the others that have been considered, is of the post and lintel type. In general, very little attention is paid to interior effects, even in the most monumental examples and types, the builders being almost wholly concerned with the outside appearance of their edifices. This was undoubtedly due in part to the habits of the people, accustomed to spending the larger part of their time in the open, which was possible by virtue of the relatively mild climate. The Greek architect was thus rarely if ever confronted with the problem of enclosing large volumes of space, so that he did not make much use of the arch, though it was not unknown to him. In these general characteristics, there is something in common between Greek and Egyptian architecture, but beyond them, there is very little similarity between the two styles. In Egyptian architecture, huge masses are employed to produce an effect of great power, but the details of construction are often very carelessly handled. Greek architecture, on the other hand, is characterized by the utmost refinement of construction and decoration, and reveals clearly in every detail the ideal of clarity and logic that was the goal of Greek thought.

The attainment of this goal was achieved by similar methods in every field of activity, the outstanding one being restriction to a narrow scope. In architecture, the Greeks created only a very few types of buildings, notably the temple and the theatre. In Greek tragedy, not more than a dozen subjects can be found that were considered worthy of treatment. Greek sculpture is almost entirely limited to the representation of the human body. But in all of these instances, the limitation was a self-imposed one due to the characteristic quality of the Greek temperament which sought to master the world by knowing it, and which could know it only by simplifying it. This attitude is clearly indicated in Greek philosophy which deals only with human values, seeing all things as possessing significance only in so far as they have to do with Man. Moreover, since Greek thought aimed to understand and

evaluate human experience by intellectual rather than intuitive processes, it follows that its artistic expression should be primarily intellectual as well. In architecture, this is evident in the mathematical relationships that exist between the buildings as a whole and their various parts, relationships upon which depend the clarity and logic that underly the entire conception of the structures.



(Courtesy the Metropolitan Museum)

FIG. 6.—ATHENS. THE PARTHENON. RESTORED MODEL IN THE METROPOLITAN MUSEUM, NEW YORK.

Greek architecture, like the others that have been considered, was primarily religious, and its finest achievement was the temple (Fig. 6). The form in which the Greek temple appears in the Parthenon was the result of a long development which probably began in the tenth century and reached its climax in the fifth. From the very beginning of this development, there were certain elements always present in the temple form. One of these was the room in which the object of worship was placed. At first it was only a simple chamber but in later buildings such as the Parthenon, the form of this inner room or cella was somewhat developed. The cella is the part of the ground plan (Fig. 7) enclosed by heavy black lines and in the Parthenon, it is in two

sections. The smaller one is the treasure room of the temple while the larger one is the shrine in which stood the statue of the patron deity of the edifice. A second characteristic that was apparently to be observed in the Greek temple from the very earliest times was the extensive use of columns. They are represented in the plan by black circles of varying sizes. Those inside the cella supported the roof beams, while the six at each end of it formed an inner portico, a feature not found in all Greek temples. Surrounding the cella is a colonnade or peristyle which is the most prominent feature of the temple exterior (Fig. 6). The number of columns in the peristyle varies in different temples. There is good reason to believe that the larger temples possessed them even

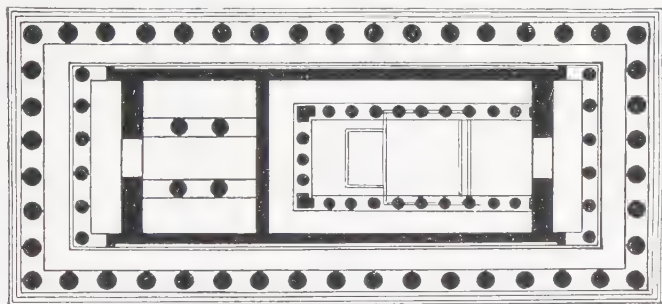


FIG. 7.—ATHENS. THE PARTHENON. GROUND PLAN.

in the very earliest times, although the smaller ones usually had only an entrance portico with columns instead of the complete colonnade around the cella.

As the most distinctive feature of the exterior of the temple, the column played a very important part in Greek architecture. Two distinct types are found, the Doric (Fig. 8) and the Ionic (Fig. 9). The names are derived from the geographical distribution of the examples of each one, the Doric column having been used chiefly in the western part of the Greek world which had been settled by the Dorians, while the Ionic is found most frequently in the east Mediterranean area where the Ionian tribes lived. From these two races, the Greek of the fifth century was descended and his architecture indicates this dual origin in the use of both types side by side in the buildings on the Acropolis at Athens. Both styles seem to have developed along somewhat

similar lines but without influencing each other to any appreciable degree until the two regions were given a temporary political connection by the founding of the Athenian Naval Confederacy following the expulsion of the Persians after the battle of Salamis in 480 B.C.

Before examining the Greek columns in detail, it should be noted that both Doric and Ionic forms are determined according to very definite rules which regulate not only the details of the column itself but also its relationship to other parts of the building. This relationship is known as the order, and the term implies the entire relationship rather than merely the form of the column alone. The Doric and Ionic orders are the fundamental ones in Greek architecture, although a third appears quite late in the fifth century, known as the Corinthian. It represents a variation of the Ionic order, differing from it chiefly in the form of the capital.

Of the two main orders, the Doric is the more simple in appearance and the more straightforward in its expression of the function of its different parts (Fig. 8). The base of the entire temple, which rests on a concealed foundation, usually consists of three steps. The shafts of the peristyle columns rest *directly* on the topmost one, the part that is immediately under them being known as the stylobate. The shafts are round but taper slightly toward the top and are thus shaped like a truncated cone. Furthermore, the sides of the shaft are not straight but curve out. This curve, which is very slight, is called entasis. Its greatest deviation from a straight line joining the circumferences of the top and bottom edges of the shaft is at a point about one-third of the way up from the bottom. The curve is never so great, however, that it causes the diameter of the shaft to be greater at any point than it is at the base. The surface of the shaft is not plain; a series of grooves, usually twenty in number, runs its entire length. These grooves are elliptical in section and are known as flutes. They are cut in such a way that they meet to form sharp edges or arrises. Near the top of the shaft, they are cut by a horizontal groove, above which the shaft flares out slightly. In this flare, which is called the necking, the flutes die away. A series of horizontal grooves separates the necking from the echinus, the member that projects outward at the top of the shaft. In the Greek Doric order, the echinus has a curved profile which is elliptical

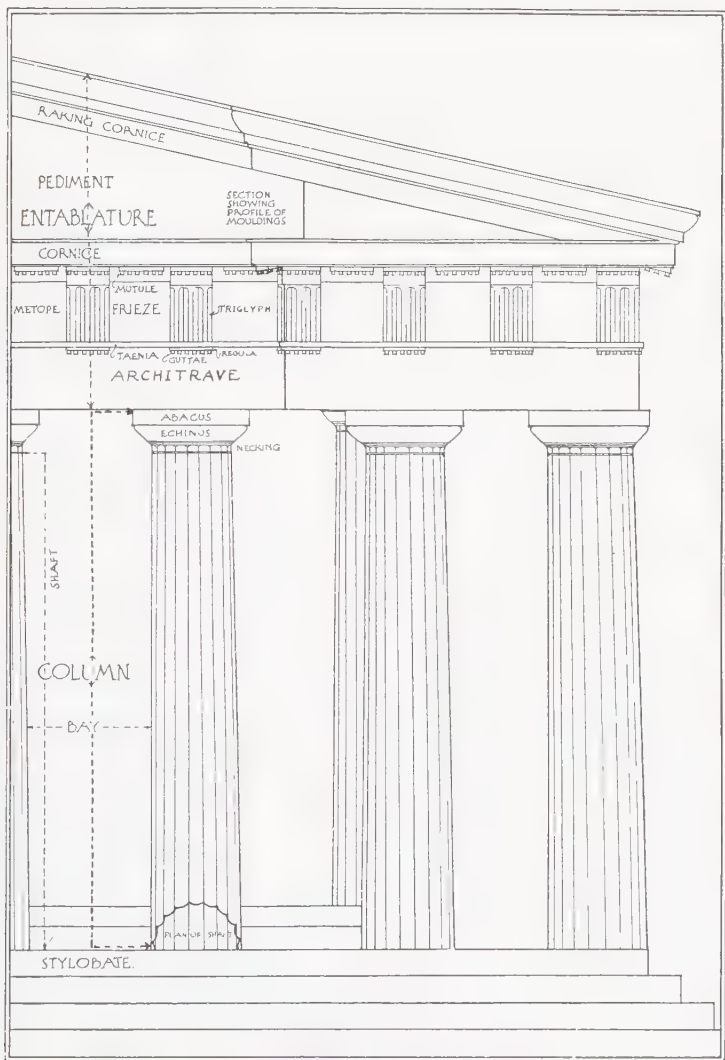


FIG. 8.—THE GREEK DORIC ORDER.

in section although the curve is not very pronounced. It is terminated by a shorter and more definite one that reverses the outward flare of the echinus and leads to a heavy square block called the abacus. The necking, echinus and abacus make up the capital which with the shaft, forms the column. The space between two columns is known as a bay or an intercolumniation.

The columns support a plain horizontal beam or architrave. The tænia is the continuous rectangular molding which crowns it, from whose lower edge a small block with six pegs hangs down over each column and each bay. The block is a regula and the pegs are guttæ. Above the architrave is the frieze of alternate triglyphs and metopes, the triglyphs being the fluted members above the regulæ and the metopes the panels between the triglyphs, usually plain though sometimes decorated with sculpture. Immediately above the frieze is a projecting moulding or cornice. Its lower face is not parallel with the ground but slants slightly in the line of the roof though not necessarily at the same angle. This lower face of the cornice is decorated with a series of thin slabs or mutules, in each of which are eighteen guttæ in three rows of six each. Along the sides of the temple, the cornice is surmounted by a moulding (Fig. 6) with occasional decorated openings for water spouts. At the ends of the structure, this moulding slants upward to form the top of the gable, and is known as the raking cornice. The flat triangle that it forms with the horizontal cornice is the pediment, in which sculptured figures were often placed. All the horizontal part of the order above the columns forms the entablature.

Many of the details of the Doric order seem to have developed from forms that would be more logical in wooden construction than in stone (Fig. 10). The capital was a block of wood placed on top of the tree trunk used as a column to keep it from splitting under the weight of the lintel, which later became the architrave. The triglyphs represent the ends of the squared roof beams, and the metopes were originally the holes between them, the name itself meaning an empty space. The mutules were the ends of the roof rafters, held in place by pegs which became the guttæ. The guttæ below the triglyphs were developed from similar pegs which held the roof beams to the lintel. All of this should not be taken to mean that the Doric temple is just a stone copy of a wooden building. There is no attempt to suggest, for example, that the

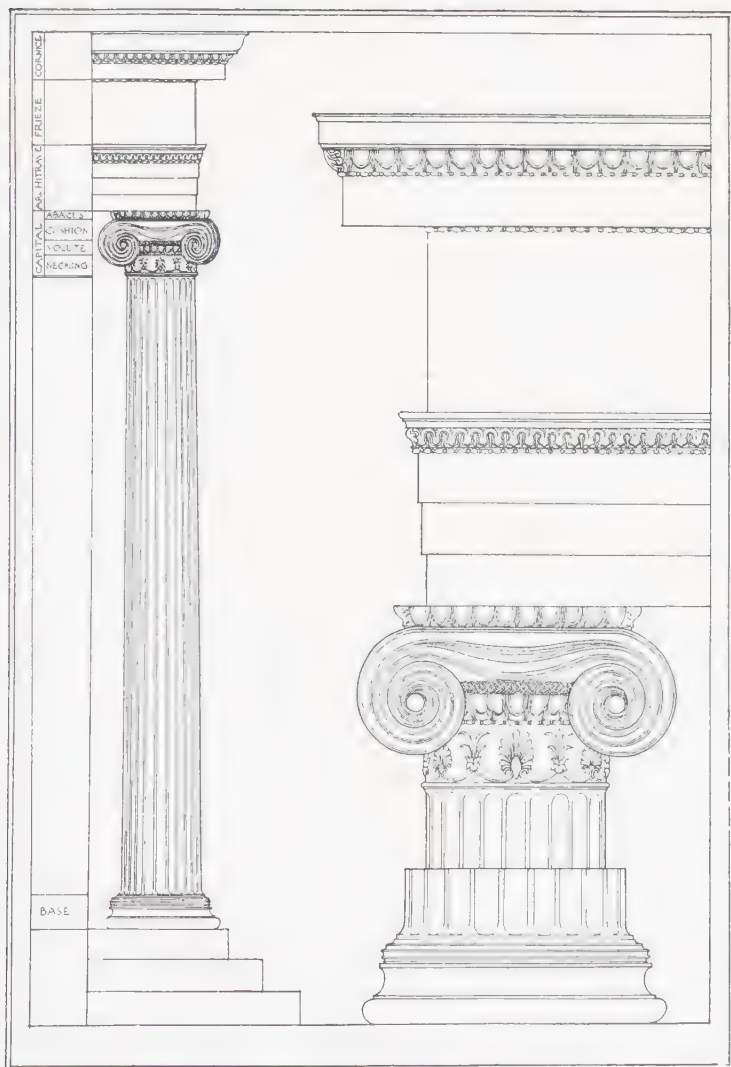
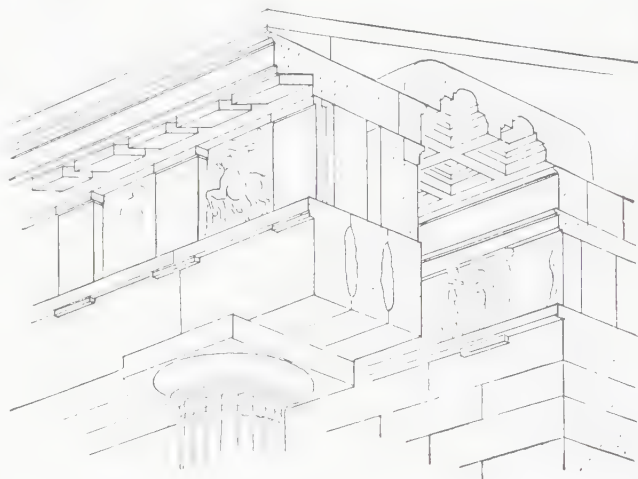


FIG. 9.—THE GREEK IONIC ORDER.

Doric Entablature
From the Parthenon



Doric Entablature
Retranslated into wood construction

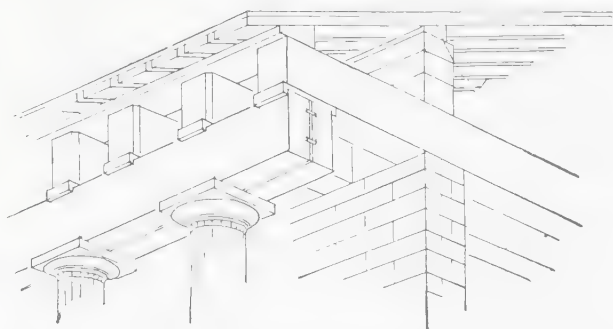


FIG. 10.—THE GREEK DORIC ORDER, WITH A RETRANSLATION INTO WOOD. (AFTER DURM)

mutules really are the ends of the roof rafters. The Doric temple represents the development of a translation into stone of forms that had originally been employed in wooden construction, a translation that retained the forms but gave them new proportions and utilized them for different ends than those they had first served. Instead of being mechanical in function, they are decorative; the exact purpose they fulfill will be considered later.

One of the most obvious points of contrast between the Doric and Ionic orders is in their relative proportions. The Doric order is rather heavy, the height of the shaft never being more than seven times its greatest diameter and in some examples only four. The Ionic order (Fig. 9), on the other hand, is light and graceful. The shaft is slender, its height ranging from eight to ten times the largest diameter. There are other differences between the two orders. The Ionic shaft does not rest directly on the stylobate but on a base formed of two concave mouldings and one convex one, usually arranged alternately as in the illustration. It tapers like the Doric column, and may have a slight entasis. It is also fluted, usually with twenty-four grooves although very early examples have more. Between each pair of flutes is a flat surface called a fillet to distinguish it from the sharp arris of the Doric shaft. At the top of the shaft is a moulded necking. The capital which surmounts it is the most characteristic feature of the Ionic order. A moulded band or echinus rests directly on the necking and is usually carved with alternate oval and pointed objects that form a motive known as the egg-and-tongue. Upon this moulding is a cushion which is flat-topped and projects over the sides of the shaft in two hanging spiral scrolls or volutes. From the sides, these scrolls look like reels that have been contracted in the middle. An abacus, usually square, rests on the cushion; it is much thinner than the Doric abacus and is decorated with a moulding.

The Ionic architrave is not plain like that of the Doric order but is divided into three horizontal bands, each one projecting slightly over the one below. It is separated from the frieze by a moulding. The frieze is continuous and may consist either of a band of relief sculpture or a series of small rectangular blocks called dentils. The former was the case in the Erechtheum whose order is here illustrated (Fig. 9); one must supply however the sculpture which once decorated the space over the architrave. Dentils and figure sculpture are never used in the same order until

late in the fourth century. Above the frieze are the cornice and raking cornice which differ from the Doric only in the mouldings with which they are decorated.

The details of the Ionic order also appear to have developed from forms originally employed in wooden construction (Fig. 11). The capital was a block of wood placed saddle-wise on the shaft to keep it from splitting; the lower corners were rounded off for the sake of appearance, suggesting the form which was

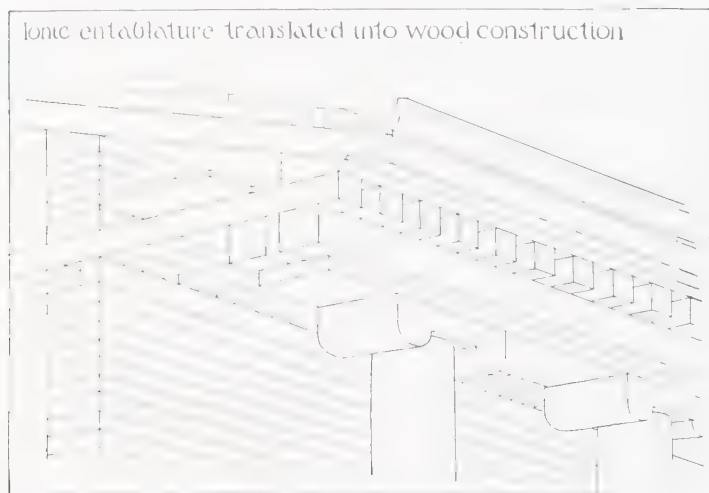


FIG. 11.—IONIC ENTABLATURE. RETRANSLATED INTO WOOD.
(AFTER DURM)

later developed into the volutes. The horizontally divided architrave was originally made up of a number of beams. The dentils recall the projecting ends of roof beams just as do the triglyphs of the Doric order. The lighter proportions of the Ionic order suggest that it is not as far removed from its wooden prototypes as the Doric, but none the less, it too represents a translation of timber forms into stone rather than a mere copying of them. In both instances, the translation was motivated by a desire for the greater impressiveness of stone as well as its higher degree of permanence.

The third or Corinthian order has already been mentioned as a variant of the Ionic in Greek architectural practice. The dif-

ference between them is in the capital (Fig. 12), in which an inverted bell-shaped core surrounded by a row of leaves replaces the necking and echinus of the Ionic capital. The leaves are modelled after those of the acanthus plant which grows wild in Greece. Out of the leaves emerges a series of volutes; some lie close to the core while others project from it to support the heavy, concave-sided abacus, the latter having a function somewhat



FIG. 12.—GREEK CORINTHIAN CAPITAL FROM THE THOLOS AT EPIDAUROS.

similar to that performed by the volutes of the Ionic capital although the Corinthian ones are smaller. Other details of the order reproduce those of the Ionic style.

Greek architecture did not attain the heights of refinement apparent in the details of its finest buildings until it had passed through a long period of development. Just when this began cannot be stated with certainty but it seems to go back as far as the tenth century B.C. The nature of the development is clearer. In both the Doric and Ionic orders, it was in the direction of forms that would express the logic of the various constructive devices employed, and increase the unity of the whole design. One of the fundamental rules of the Doric order was that a triglyph and a

metope must come over the center of each column and of each bay (Fig. 8). The immediate purpose of this arrangement was to establish a connection that could be easily observed between the frieze and the peristyle. This was not difficult, but another rule, imposed for the sake of the appearance of the design, involved some complications. It was that at the corners, the triglyphs on the front and side of the building must meet in order to avoid ending the frieze with the empty space that would result if a metope or half-metope were there. This meant that the angle triglyph had to be moved from its position over the center of the terminal column of the peristyle, making the metope next to it wider than the others and destroying the uniformity of the frieze. To avoid this difficulty and to secure an adjustment of all the details of the order to produce the desired effect of uniformity and symmetry were the major problems in the development of the Doric order. It was usually solved by slight variations in the widths of the angle bays and metopes to produce a visual effect of uniformity even though the actual dimensions were not the same throughout.

In the Ionic order, the angle column also presented a problem. Its nature is revealed in the illustration of the entablature of the north porch of the Erechtheum (Fig. 13). In its usual form, the Ionic capital is two-sided. The volutes that seem to increase the capacity of the shaft to support the architrave must be seen from either directly in front or back if that effect is to be observed. The usual form of the capital is quite adequate if it is in a colonnade where it can theoretically be seen only from those points. It is not adequate when it is seen from the side, as it could be on an angle column, for the volutes do not project to the front and back. From that point of view the shaft and the capital are nearly the same width; the column does not swell out to meet the weight of the architrave and consequently seems less capable of supporting its weight. To remedy this, both front and side of the angle capital are provided with volutes. This brings two of them together at the corner where front and side architraves meet, each volute projecting at an angle to the plane of the architrave instead of being parallel with it. In theory, this was not a perfect solution of the problem but it was the generally observed practice. The later popularity of the Corinthian order, as in Roman architecture where it replaced the Doric and Ionic almost entirely, is partly

due to the fact that it could be used without modification at any point in a peristyle. The Corinthian frieze, being continuous as in the Ionic order, avoided the difficulty of the corner triglyph; the Corinthian capital was round and offered none of the problems inherent in the two-sided Ionic.

In addition to the development of details that characterizes the progress of the Greek orders, there is that of the temple form as a whole. The *Basilica at Paestum* (Fig. 14), a Greek colony on the western coast of Italy a little south of Naples, is one of the oldest

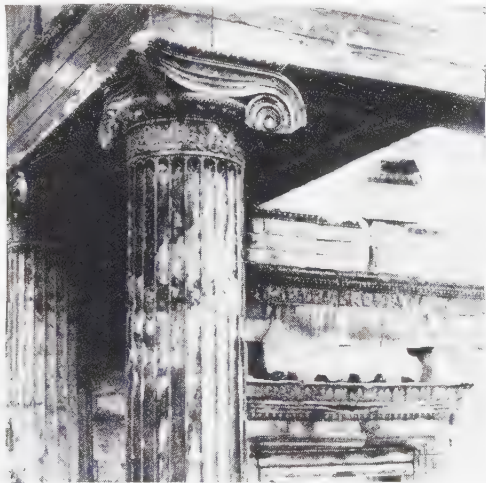


FIG. 13.—ATHENS. THE ERECHTHEUM. ENTABLATURE OF THE NORTH PORCH.

Doric temples in existence. Although it is in ruins, enough remains to indicate that it was built at an early stage in the development of the Doric style, about 550 B.C. One thing that shows this is the odd number of columns in the façade. In the developed Doric style, as in the Parthenon (Fig. 6), the number of façade columns varies but it is always even, thus avoiding the effect of dividing the composition in halves which results when a solid instead of a void is in the center of a symmetrical arrangement. Another indication of the early date of the Basilica is the shape of the columns. Both the taper and entasis are so pronounced that the top of the shaft seems almost too slight for the weight

it supports. This is in spite of its heavy proportions, the height being only 4.4 times the greatest diameter. The echinus flares out far beyond the sides of the shaft and the abacus is very heavy. All of these obtrusive details are indicative of a style in the process of formation rather than one whose elements have been thoroughly integrated. The general heaviness of proportion is evidence that the resources of the material used in building have not been completely realized. Fear that the columns would not be strong enough



FIG. 14.—PÆSTUM, THE BASILICA.

has led to making them much stronger than they need be. The overemphasis of the taper and entasis is another trait of the columns that marks them as early. Even in the most archaic period, it had apparently been observed that such variations from a straight perpendicular line for the profile of the shaft made it seem stronger, but the primitive builder did not know just where to stop. They are consequently so obvious as almost to defeat their purpose.

Both the Doric and Ionic styles reached the climax of their achievements in the Golden Age or fifth century B.C. This was

the great period during which the genius of the Greeks reached a climax in every sphere of activity. The yoke of Persian dominance had been thrown off by the military victories of Marathon and Salamis and a feeling of national unity was beginning to stir in the hitherto disunited city states of the Greek world. A naval federation formed among those states made Athens dominant in the Hellenic world from 461 to 430 B.C. Under the leadership of Pericles, funds raised by the federation were diverted to other



FIG. 15.—ATHENS. THE PARTHENON. FROM THE NORTHWEST.

ends, that included the monumental embellishment of Athens, by methods that were not above criticism. But today, it seems that the ends must have justified the means, for the result of Pericles' machinations was the decoration of the Acropolis, the hill of rock that is the heart of Athens, by the great architectural monuments that still stand there, the Parthenon and the Erechtheum.

The *Parthenon* (Figs. 6, 7 & 15) was the finest Doric temple built. It was begun in 447 B.C. and completed fifteen years later by two architects, Iktinos and Kallikrates. The plan (Fig. 7) shows that it had eight columns on both ends and seventeen along the

sides, the angle columns being counted twice. Inside the peristyle, a row of columns at each end of the cella formed inner porticos. Above them, the usual Doric frieze of triglyphs and metopes was replaced by a continuous band of sculptured figures encircling the entire cella in the Ionic manner. Inside the cella, the columns which once held up the cross-beams of the roof were in two ranges of orders, one above the other. The lower one was Doric, the upper Ionic, an architectural symbol of the union achieved in the fifth century of the two main divisions of the Greek world.

Sculptured ornament was an integral part of the design of the Parthenon. The frieze around the cella wall has already been mentioned. In addition, every metope in the building was carved and the pediment of each façade was filled with statues. In quality and amount, the sculpture of the Parthenon surpassed that of any other temple in the Greek world. Finely carved mouldings were used in great profusion throughout the entire structure. The details of the carving, both mouldings and figured, were accented by color, and the effect (Fig. 6) must have been very different from the monotonous whiteness that is part of current notions of Greek architecture.

The construction of the Parthenon reveals a degree of technical skill that is astounding. Earlier temples such as the Basilica at Paestum were built of coarse limestone covered with a thin layer of marble stucco, but the Parthenon was of marble throughout. No mortar was used anywhere in the structure. The columns were built up in horizontal sections or drums, fitted together with such accuracy that the joints can hardly be seen. The marble blocks in the walls had their adjacent surfaces highly polished around the edges to form a tight joint and were held together by iron cramps let into slots in the blocks and fixed in place with melted lead. The marble itself, from quarries in the nearby Mount Pentelicus, was of exceptionally fine grain which made possible the very delicate refinements of form which appear in the building. Some of these have already been mentioned such as the entasis of the column. This subtle, almost imperceptible parabolic curve of the vertical outline was introduced to give the column an impression of yielding slightly under the weight it supports. This has the effect of making it seem alive and elastic instead of stiff and inert as would be the case if its profile were a straight line.

The same effect is obtained on a larger scale in the building as a

whole by slight rises in the surfaces of the stylobate and entablature which are not perfectly level but curve upward in the middle. As in the column entasis, these curves are so slight as to be almost imperceptible but they play a very important part in the effect of the building on the observer. It is to them and to other refinements that the structure owes its impression of life and vitality. Without them, it would be mathematically correct, but it would be dull and lifeless, lacking the sense of organic integration which makes that mathematical correctness a thing of beauty. The logic of a purely mathematical relationship appealed strongly to the Greek; it was the foundation of everything that he considered beautiful as is obvious even in the smallest details of the design of the Parthenon. But his ideal was not so much mathematical correctness as the visual impression thereof. His experience had told him that the eye supplied what mathematical perfection lacked, of vitality and organic strength. The refinements of the Parthenon were introduced for the purpose of creating a visual impression of mathematical consistency, even though they are actually departures from it.

Such refinements of form as the curvature of the stylobate in the Parthenon reveal the direction taken by the development of the Doric style, particularly when it is compared with the earlier Basilica at Præstum. The columns of the later building do not have the exaggerated taper and entasis of the earlier ones, nor do the capitals flare out so far beyond the sides of the shafts. The shafts themselves are more slender and the relative width of the peristyle bays somewhat greater than in the earlier building. These details indicate that the ideal toward which the Doric builder was striving was one of subtle refinement rather than of power. This is also apparent in the proportions of the ground plan of the Parthenon as compared with the Basilica. The latter is almost exactly twice as long as it is wide, whereas the length of the Parthenon is two and one-quarter times its width, a proportion which the Greek considered particularly beautiful. That the Parthenon represented the unconscious ideal toward which the entire Doric development had been pointing is indicated by the fact that after its completion, no changes of any importance were made in the order as a whole.

The Ionic style also appears in its most perfect form in a temple in Athens, for just as the Parthenon represents the climax

of the Doric style, so the *Erechtheum* (Fig. 16) is the finest example extant of the Ionic. It stands on the Acropolis, north of the Parthenon. It was begun about 421 B.C. and was never entirely completed. This may account for its irregular plan which is clearly indicated in the illustration. The site it occupies is very uneven. From the south-east corner, the point of view from which the illustration was made, the ground slopes rapidly away. As a



FIG. 16.—ATHENS. THE ERECHTHEUM. FROM THE SOUTHEAST.

result, the north porch is almost ten feet lower in level than the east one. To locate the temple elsewhere was impossible for it was intended to commemorate an event of great significance in the mythical history of Athens which took place on that identical spot. It was there that the famous contest between Athena and Poseidon occurred to determine which of the two should be the patron deity of the city, and left its traces in a well of salt water, a trident mark in the stone of the hill, and the olive tree planted by Athena.

The main part of the Erechtheum is a rectangular cella which

was subdivided to form three smaller rooms. They were reached through three porches, on the east, north and south sides respectively. The two former are supported by Ionic columns, the latter by statues of maidens called caryatids upon whose heads the architrave is carried. It is possible that the original plan called for a chamber to the west which would have corresponded in size to the present cella. Had it been built, the ground plan would have been symmetrical with the North Porch and the Porch of the Maidens opposite each other in the center of the long sides. This plan it was impossible to carry out as it would have meant encroaching upon an area to the west, consecrated to another deity whose priests refused the necessary permission. Before arrangements could be made with them, the funds appropriated for the building gave out and it was never completed.

So great were the difficulties to be overcome with regard to the site of the Erechtheum that its designer apparently gave up all hope of achieving a harmonious and unified effect like that of the Parthenon. Certainly the symmetrical beauty of the latter is not present here. But as if to compensate for this, the details of construction and decoration in the Erechtheum are executed with a skill that makes them possibly even more beautiful than the similar details in the Doric structure. Observe, for example, the south wall of the cella which is perfectly plain yet exceedingly effective by virtue of its admirable proportions, the beautiful texture of the Pentelic marble and the crisply-cut base and cornice mouldings. Throughout the entire building, the carved ornament is of the finest design and execution. A notable example is the doorway of the North Porch (Fig. 13) which is of interest, apart from the luxuriousness of its decoration, as being the first portal in Athens to be framed in stone instead of wood. The columns of the North and East Porches are similar in design, although the shafts of the latter are cut without entasis, possibly because they are somewhat smaller and do not require it. The capitals of the North Porch are unsurpassed in Greek architecture for their beauty of design and execution. The involved spirals of the volutes and the delicate palmette ornament on the necking stand alone in this respect. The carved decoration of the building, apart from that already described, consisted of a palmette frieze along the top of the walls and a continuous band of white marble figures against

a background of black Eleusinian limestone which has disappeared almost entirely.

The small porch on the south side of the Erechtheum (Fig. 16) differs from those to the north and east in having human figures as supports for the architrave instead of columns. In thus representing a human being in a rôle more appropriately taken by an inanimate column, there may be grounds for criticism. Possibly it was for this reason that it does not occur often in Greek art. However that may be, the artistic problem involved is to secure an adjustment of the figures and the architecture so that each will appear to advantage. The Erechtheum caryatids stand erect, bearing the heavy architrave on their heads with no apparent effort. The draperies fall in straight folds, suggesting the flutes of a column. In each figure, the knee toward the center of the porch is relaxed, creating the sense of an inward thrust to support the architrave. A row of dentils replaces the figured frieze that appears in other parts of the building, thus avoiding the contrast in scale which would have been present if the small figures of the frieze had been closely related to the caryatides.

The Corinthian order was rarely used in Greek architecture of the fifth century. As a variant of the Ionic order, it was first employed in interiors when conditions were such that the Ionic capital in either of its forms did not seem appropriate. Its first occurrence in an exterior was in the *Choragic Monument of Lysikrates* in Athens (Fig. 17), erected to support a bronze tripod awarded to the winner of a choral contest held in Athens in 334 B.C. Upon a high base or podium, there is a circle of six columns joined by a wall to form a cella which is inaccessible. The columns stand out from the wall but are partially enclosed by it. The entablature is similar to that of the Ionic order as was usual when the Corinthian style was employed. This was perfectly possible since the Corinthian order did not develop from forms that were originally constructive, hence the details of the entablature were determined only by decorative considerations. A variation from fifth century Ionic models is seen in the entablature of the Monument of Lysikrates, however, in the use of two friezes, one of sculptured figures and one of dentils. The effect is more ostentatious than in the earlier buildings, and indicates the tendency to be observed in later classic architecture, particularly in that of Rome.

Observe how logical and visually comprehensible is the arrangement of the details of the Doric order. The powerful vertical accent of the shaft must be harmonized with the equally powerful horizontal one of the architrave for if they met directly, the contrast in movement would be too great for them to have any ap-



FIG. 17.—ATHENS. MONUMENT OF LYSIKRATES.

parent relationship to each other. This relationship is established by the capital. In its upward course along the shaft, the eye is arrested by the horizontal grooves of the necking and then carried out by the curve of the echinus to the minor horizontal accent of the abacus. From this, the transition to the major horizontal of the architrave is easily managed. The vertical movement initiated by the shafts is taken up once more in the triglyphs, not as

powerfully but more frequently. It is terminated in the rounded ends of the triglyph grooves, and a final cadence is added by the mutules which form an almost continuous straight line around the building. In this way, the contrast between the vertical movement of the columns and the horizontal one of the entablature is harmonized to form a complete visual unity.

The Ionic order achieves a somewhat similar balance of vertical and horizontal accents. The column stands upon a base since its more slender proportions do not give it the same appearance of intrinsic sturdiness that permits the heavier Doric shaft to be placed directly on the stylobate. The flutes and capital operate in much the same fashion as in the Doric order, except that the retarding effect of the Ionic volutes with their reversed curves is stronger than the outward flare of the Doric echinus. For this reason, the Ionic abacus does not need to be as heavy as that of the Doric order. The function of the dentils is similar to that of the triglyphs, just as their structural origins are the same. The Corinthian capital is also designed as an element in the harmonization of the contrast of horizontal and vertical accents which is intrinsic in the post and lintel system. The leaves around the core soften the vertical lines of the shaft, while the weight of the abacus and architrave is easily borne by the rigid, almost metallic volutes on the corners.

It is obvious that these details of Greek architecture are not essential to structural stability. The column is not actually made stronger by the capital. The guttæ and triglyphs and dentils could be removed from a building and it would still stand, since they have nothing to do with its unity as construction. But they are essential to its visual unity and in this fact can be seen the powerful contribution of design to Greek architecture. The immediate function of the temple was very simple; it needed to be nothing more than a room for the statue of a god. The engineering or constructive problems of Greek architecture were equally uncomplicated and were solved quite early. The whole development of Greek architecture is seen in the solution of the problem of design, in the searching out of means by which the structural forms could be so related to each other that they would make objective the clarity and logic which for the Greek was Beauty. In achieving that end, the function of architecture that is even more significant than discharge of its program was performed, for in the Parthe-

non, the aims and ideals of a whole period are set forth in imperishable marble.

Great though the achievement of the Greek architect was, there are certain aspects of the art of building which he disregarded. Foremost among them was the adequate treatment of interiors. This is not found in Greek architecture owing to its preoccupation with visual effect. To achieve an adequate interior effect in architecture, some method of suggesting space is essential. Now space is an intangible thing which cannot be seen, and since the foundation of Greek thought is that reality is tangible and consequently visible, it follows that to the Greek, space was unreal, and hence not a premise in his architectural compositions.

Two outstanding characteristics of Greek architecture appear in review. The first of these is the objectivity which underlies its apparent simplicity. Nothing has to be supplied in the mind of the attentive observer to reach an understanding of it. It is for this reason that the post and lintel system is preferred to the arch, for its manner of operation can be comprehended from observation without having to supply mentally an intangible element like horizontal thrust. But with this apparent simplicity goes a variety of effect, a complexity of detail within the large simplicity of the design as a whole. This is the second characteristic of Greek architecture. The beauty that results from the interaction of the two is formal and harmonious, a monumental expression of the goal of Greek thought, to attain infinite variety and refinement within a consciously restricted field of activity. The subordinate importance of space in Greek architecture is one result of this restriction. A parallel to it is the almost total absence of any reference to landscape in Greek literature. Such limitations as these make the Greek mode of thought seem very far from offering any solution of modern problems. The complexity of life in the 20th century is such that the conscious simplification by means of which the Greek sought to determine reality is impossible. But insofar as Greek architecture can make objective the intrinsic beauty of clear and logical thought, just so far is it capable of enriching the life of him who regards it.

ROMAN ARCHITECTURE

IT IS not unusual to find Greek and Roman building considered in histories of architecture as two phases of one general style called classic. This classic style is supposed to have reached its climax in the Parthenon and the Erechtheum, after which it declined. From such a point of view, Roman architecture is only a debased form of Greek. Now this is to ignore completely the fact that the Roman temperament was very different from the Hellenic; the ideals of the two races were almost antithetical. It follows that the purposes and methods of Roman and Greek architecture were not and could not be the same, hence they cannot be evaluated in the same terms.

Purely objective points of contrast between the two styles are seen in the constructive principles employed and in the type and function of the buildings. The Greek used the post and lintel system exclusively, while the Roman employed both the post and lintel and the arch, the latter predominating in the more monumental structures, either unmodified or in its developed forms, the vault and the dome. Greek architecture was limited almost entirely to the temple, whereas the architectural needs of the Roman were so extensive that they could not possibly have been discharged by a single form. There were Roman temples, it is true, but they were neither as numerous nor as impressive as the amphitheatres, public baths, business structures, bridges and aqueducts and the various other types that were essential in the utilitarian Roman world. The difference between Greek and Roman constructive devices and functional programs produced a significant contrast in the effects obtained in the two styles as will subsequently be seen.

The orders were used extensively in both styles, but with characteristic points of difference (Fig. 18). The Doric and Ionic appear only rarely in Roman building. When they do, the general proportions of both are somewhat lighter than in Greek examples. The Doric shaft is provided with a base, the echinus be-

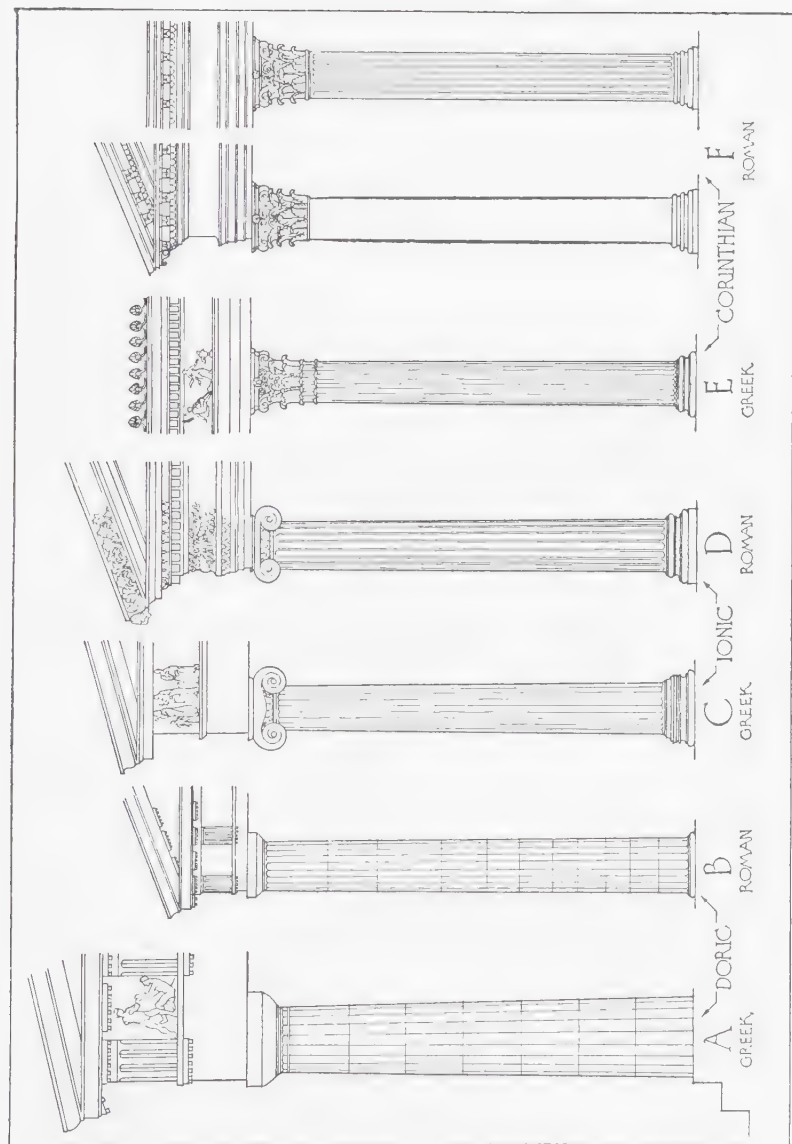


FIG. 18.—COMPARATIVE GREEK AND ROMAN ORDERS.

comes a quarter-round instead of the subtle elliptical curve seen in Greek examples and the entablature is much lighter. In the Ionic order, both figured and dentil friezes are regularly employed together. The flutes, whenever they occur, are circular sections rather than elliptical. They are often omitted entirely in all the orders. In Greece fluted columns were essential, for the clear, undiffused sunlight falling upon a smooth column would produce an effect of dazzling light on one side and deep shadow on the other. Such an effect would tend to destroy the definition of the column profile and weaken its apparent ability to support the weight resting on it. The flutes create a play of light and shade on the shaft, accenting the vertical lines in it and increasing its appearance of strength. In Rome where the light was neither as intense nor uniform as in Greece, this was not so much of a consideration. Furthermore, the Romans were very fond of using marble that was veined or with different colored patches in it for columns, and flutes would have spoiled the effect of such natural markings.

Neither the Doric nor Ionic orders were used by the Romans as much as the Corinthian whose greater ostentation appealed to their taste much more than the comparative simplicity of the others. Its intrinsic richness of appearance was often augmented by various means. One was the employment of Ionic volutes with the foliate capital, the result being known as the Composite type. Another was the substitution of ram's heads with curling horns for the angle volutes. The horizontal brackets under the cornice (Diagram F, Fig. 18) are known as consoles or modillions. They represent a Roman addition to the Corinthian order that had a far-reaching influence; probably they were introduced for the purpose of enriching the effect of the Ionic dentil frieze.

In general, the Roman employed the order as a decorative feature in contrast to Greek usage in which it was always structural. Thus it was possible for the Roman to introduce many details that had no structural meaning at all, simply to augment the decorative effects. This same consideration applies to the design of the entire building as well. This is demonstrated in the *Maison Carrée* at Nîmes in southern France (Fig. 19), which was erected in 16 B.C. and has the distinction of being the best preserved Roman temple in existence. For two-thirds the length of the building, the Corinthian columns do not stand free from the cella

but are actually part of the wall. Their function is a purely decorative one rather than structural as in the Parthenon (Fig. 15). Columns used in this way form an applied order, the purpose of which in this case is to lend variety to a surface that would otherwise be plain and monotonous. In later Roman design, the decorative function of the applied order is made even clearer by the projection of the entablature over each column (Fig. 24). Clearly the primary reason for the existence of a column is to sup-

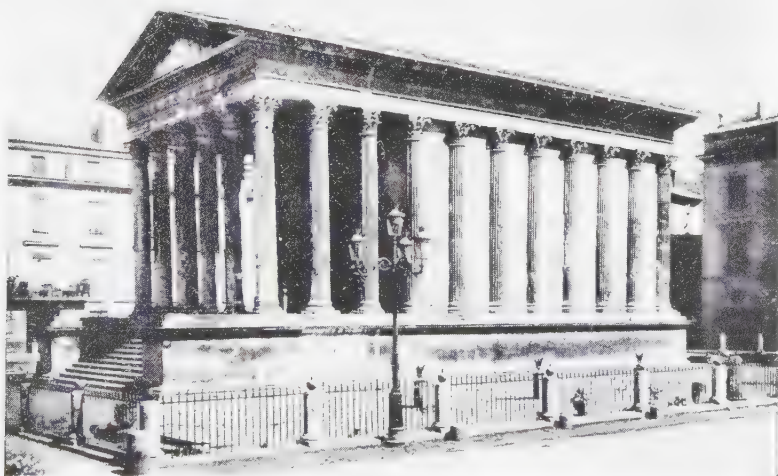


FIG. 19.—NÎMES. THE "MAISON CARRÉE."

port something. The entablature that comes out from the plane of the wall over an applied column emphasizes the fact that the latter supports nothing and is present only for its decorative value. Another characteristic feature of the Roman temple that appears in the Maison Carrée is the high podium or base on which it stands. A flight of steps leads to the façade which is further emphasized as the most important part of the exterior of the temple by the portico of free-standing columns. Contrast this arrangement with that of the Greek temple (Fig. 15) which has only a low base giving access on all sides to the space between the peristyle and the cella. Still further details of the Roman style

can be observed in the Maison Carrée. Modillions appear under the cornice. The entablature follows Greek models more closely than in many Roman buildings but the frieze is a richly ornamented *rinceau* or continuous band of foliage instead of a series of figures. The column shafts are of the monolithic type, cut from a single block of stone, that was preferred by the Romans to the type built up in drums employed in Greek construction. The Maison Carrée also furnishes one of the few examples of linear refinements in Roman architecture. The long sides are convex in plan and variations in the width of the bays are visible on all four sides. These refinements are probably due to the enthusiasm for Greek ideas that prevailed in the Roman empire during the Augustan age when the Maison Carrée was constructed.

The Maison Carrée demonstrates conclusively that in dealing with the problem of temple design, the Roman achieved a result very different from that seen in Greek building. The fundamental dissimilarities between the architectural aims and styles of the two countries are even more apparent in a structure like the *Colosseum* in Rome (Fig. 20). No precedent for this type of architecture existed in Greek building, as none existed in Greek life for the barbaric gladiatorial combats held in it. The orders are applied; Doric in the lowest story, Ionic in the second, Corinthian in the third and fourth. The topmost order differs from the others in consisting of pilasters instead of applied columns, the pilaster being rectangular as compared with the circular section of the column. These orders are only a decorative shell for the building and contribute nothing to its stability, which depends upon massive arches. The orders originally framed these arches as they still do at the left in the illustration, but that they had no functional relation to them is demonstrated at the right where their removal has not affected the structural integrity of the building. The sharp distinction between structure and ornament in the Colosseum reveals another point of contrast between Greek and Roman architectural methods. In the Greek style, structural necessities were made decorative; in the Roman, they are concealed by the decoration.

The arches leading into the bowl of the Colosseum are not the only ones employed in its construction. At the point where the outer part has been taken away, the faces of arches perpendicular to the outer wall can be seen. They are the ends of barrel vaults



FIG. 20.—ROME, THE COLOSSEUM.

which were once continuous over the corridors around the oval. These corridors provided means for the spectators to move from one part of the structure to another and were like similar passages in a modern football stadium. The barrel vaults over the corridors of the two lower stories are like nothing so much as a series of arches set face to face instead of end to end as in the arcade below (Diagram A, Fig. 21). Needless to say, a vault like this requires buttressing just as an arch does, and at all points in its entire length. In the two lower stories of the Colosseum, the outward lateral thrusts of the outer barrel vault are buttressed by a heavy wall supported on the arcades. The inward thrusts are met by the outward ones of a similar vault over the second corridor,

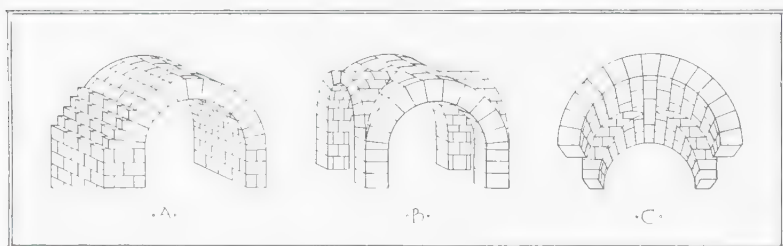


FIG. 21.—BARREL AND GROINED VAULTS.

which is buttressed in turn on the inside by vaults at right angles to the corridor itself covering ramps which lead into the bowl.

The value of the vault as a covering for the corridors of a structure like the Colosseum is considerable. It provides space for the free circulation of spectators that would be seriously obstructed if the heavy masonry of the upper stories had to be supported by lintels on posts. Furthermore, the vault could be built of concrete which was much less expensive than stone. Roman concrete consisted of layers of small stones or broken bricks placed in a mould the shape and size of the desired form and cemented in place by a mixture of volcanic dust and water poured around it. When the whole mixture became solid, it formed a homogeneous mass of surprising strength and durability. Concrete provided the Roman builder with an inexpensive medium of construction capable of very impressive effects. The great public buildings of Rome, which could not possibly have been built in any other medium known at

the time, have no equal for sheer massiveness and tremendous bulk before the structures made possible by the use of steel in modern times. They were cheap to construct since comparatively unpromising material could be employed, as is demonstrated in many buildings erected in Rome after 64 A.D. in Nero's reign, when the city was devastated by fire. The concrete of which they are built is filled with fragments of stone that had been burned and was useless as constructive material in its own right. In the more important buildings, the concrete was not left exposed but was concealed under a layer of cut stone or brick. In the Colosseum, this concealing layer takes the form of applied orders, but a great deal of it has been removed in subsequent times as can be seen in our illustration.

The Colosseum is a typical example of Roman construction in its use of concrete and of vaults. Both are also employed in the great public baths which are another characteristic form of Roman building. The illustration (Fig. 22) shows a restoration of those erected by Diocletian in 306 A.D. The massive concrete walls and vaults are veneered with marble slabs. The columns are almost entirely decorative in purpose, the stability of the structure being assured by the concrete vaults. Those over the principal division of the building are of the groined type which is best described as consisting of two barrel vaults of equal height and span meeting at right angles (Diagrams B & C, Fig. 21), the vault deriving its name from the lines formed by the intersection of the under surfaces, known as groins. The advantage of the groined vault over a plain barrel vault is well demonstrated in the baths. The architect's problem was to construct a fire-proof covering for an oblong space, which though possible by a barrel vault, would result in a very dark and gloomy interior. Windows would be possible only in the ends of the space to be vaulted for if they were cut in the sides, the buttressing of the vaults with their continuous thrusts would be weakened where the openings occurred. The groined vault offered a way out of this difficulty. Reference to the illustration (Fig. 21) will show that openings already exist in the sides of each unit of the groined vault; moreover its stability is unimpaired by those openings because its thrusts are concentrated at the corners of the unit instead of being continuous along the sides. These thrusts are directed along the groins, that is, they are diagonal and not lateral, requiring therefore only a but-

trekking at the corners of the vault. In the *Baths of Diocletian* this is supplied by heavy walls at the end of each unit of the vaults and perpendicular to the main axis of the space they cover. These walls can be seen over the roofs of the barrel vaults covering the side chambers. The same type of construction is employed in the last and greatest of the Roman basilicas which was begun by Maxentius near one end of the Roman Forum and finished by Constantine in 313 A.D. The basilicas were the center of Roman commercial life; in their spacious halls the business of the day

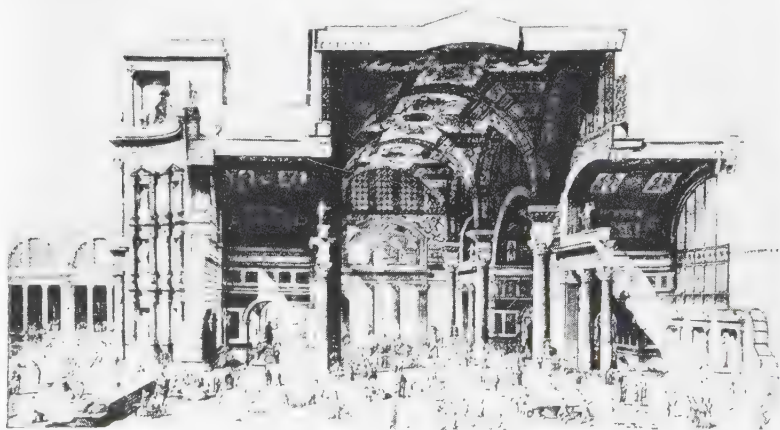


FIG. 22.—ROME, THE BATHS OF DIOCLETIAN. (RESTORED BY PAULIN)

was carried on, just as the baths provided for social activity. The programs of both types of building were much the same. Provision had to be made to accommodate large crowds of people in an enclosed space and the groined vault offered the best means of covering it. The interiors were unobstructed by supports and adequately lighted. The results in both cases have the impressiveness of mass and form which is typical of Roman architecture at its best, as can be seen in the Basilica of Constantine even in its present state of ruin.

The preoccupation of the Roman builder with the arch is indicated by the extensive use in Roman buildings of the barrel and groined vaults, both of which are developments thereof. Yet a

third is seen in the *Pantheon* in Rome (Figs. 23, 24), a large circular structure covered by a dome. Apart from its great architectural significance, the Pantheon is noteworthy as being the oldest important roofed building in the world that is still intact. The rotunda was erected about 120 A.D. by Hadrian. The construction is of brick and concrete with a stone facing. The exterior (Fig. 23) is impressive chiefly because of its bulk. The lower



FIG. 23.—ROME. THE PANTHEON. EXTERIOR.

walls of the building form a cylinder on which a low dome directly rests. This dome is almost cut off from view from the front by a great porch with eight Corinthian columns supporting a broad pediment. In the interior (Fig. 24), there is an effect of abstract spatial unity that is without rival. It is probably due in part to the fact that the height of the dome, which is 141 feet above the pavement, is exactly the same as the largest diameter of the interior. The dome is somewhat less than a semi-circle as the side walls supporting it rise vertically to a height of about seventy-five feet. This wall is in two levels separated by a full entablature on

Corinthian columns and pilasters in the lower part. These serve as frames for great recesses in the thickness of the wall alternating

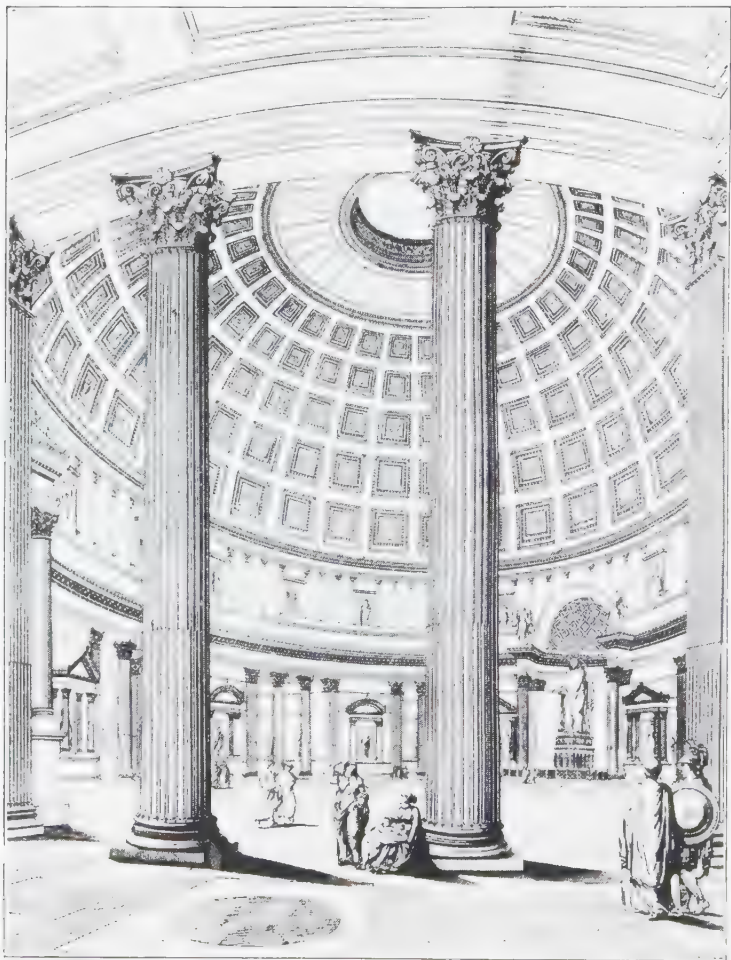


FIG. 24.—ROME. THE PANTHEON. INTERIOR. (RESTORED BY ISABELLE)

with spaces occupied by shallow niches with rectangular and semi-circular pediments on colonnettes. The entablature is broken out at the entrance portal and the niche immediately opposite. The

upper level of the wall is decorated with applied pilasters which serve as frames for niches and panels and to support a cornice from which the dome springs. The inside of the dome is faced with concrete and decorated with rectangular recesses or coffers which are designed to accent the upward over-arching lines of the cupola in addition to their structural function of lightening the weight of the dome. At the very top of the dome is a circular opening about twenty-nine feet in diameter, the only source of illumination for the interior.

The construction of the Pantheon is very ingenious. The recesses in the lower level of the wall supporting the dome are so deep that they convert it into what actually amounts to eight huge isolated piers. Upon these piers, the weight of the upper wall and the dome is concentrated by arches in the thickness of the wall itself which are radial and tangent to the circumference of the interior. The steps visible at the top of the supporting wall on the exterior (Fig. 23) were intended to buttress the lateral thrusts of the dome which is about four feet thick. This was probably a by-product of the process of construction, since such buttressing was unnecessary after the concrete hardened for the dome then became a homogeneous mass with no more lateral thrusts than would be present in an inverted tea-cup.

Important as these technical considerations are, they are completely overshadowed in the observer's mind by the effect of the interior itself. As has been mentioned, it is one of complete spatial unity, created by the equality of height and diameter and emphasized by the coffered ornament of the lower surface of the dome which accents its cupping, enclosing effect. Furthermore, the only opening in it is the eye at the apex so that there is no sense of any relationship between the space inside the dome and that outside. The result is to make the effect of space in the interior of the Pantheon even more powerful, so powerful, in fact, that space seems to become a tangible substance that can be isolated and handled objectively as the Greek architect treated his concrete forms.

The materialism of the Roman that led him to attempt to give tangibility to imponderable space also made him more concerned about his own physical comfort than the Greek had been. In fifth century Athens, very little attention was paid to private dwellings which were hardly more than a place to eat and sleep; all that

remains of Greek houses of the Golden Age indicates that they scarcely possessed any monumental qualities. By contrast, Roman houses, though based on Greek prototypes, were very pretentious. Characteristic examples can be observed in Pompeii where a con-

siderable number have been almost completely recovered from the burial of the city in the eruption of Vesuvius in 79 A.D. In plan, the *Roman House* (Fig. 25) was divided into two main parts. At A is the atrium, an open court surrounded by covered galleries with a pool, B, in the center. This was the semi-public portion of the house where the owner might conduct his business. Opening from it were other rooms for special purposes. To the rear of the atrium and definitely separated from it were the domestic apartments of the house, centering around the peristyle, C. This also was an open court surrounded by roofed galleries (Fig. 26) and was often treated as an enclosed garden as in this instance. Frequently an exterior garden opened out to the rear of the whole building, overlooked by the reception room at D. The better-

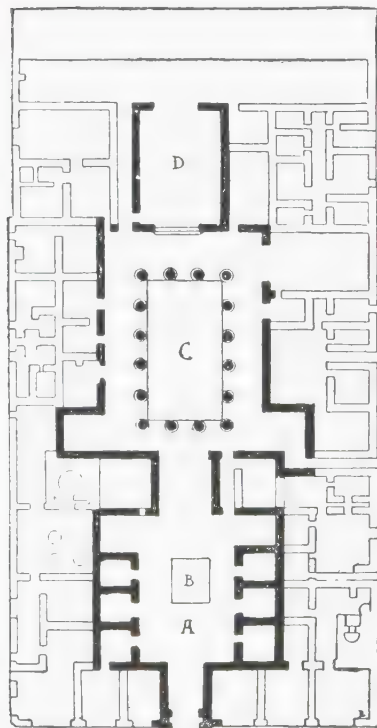


FIG. 25.—PLAN OF A ROMAN HOUSE.

were planned with a consideration for the various functions of the different parts and a regard for the privacy of the occupants that seems almost modern. Since the attention of the designer was thus largely occupied with problems of interior arrangement, the exterior of the Roman house was of secondary importance, and rarely impressive in effect.

Some of the most characteristic examples of Roman architecture were of an entirely utilitarian nature and made no pretense to conscious beauty. Such are the aqueducts by which the cities were supplied with water. One of the best preserved is the famous *Pont du Gard* near Nîmes in southern France (Fig. 27). It was built in the 1st century A.D. as part of a system over twenty-five miles in length which was underground for the most part but crossed

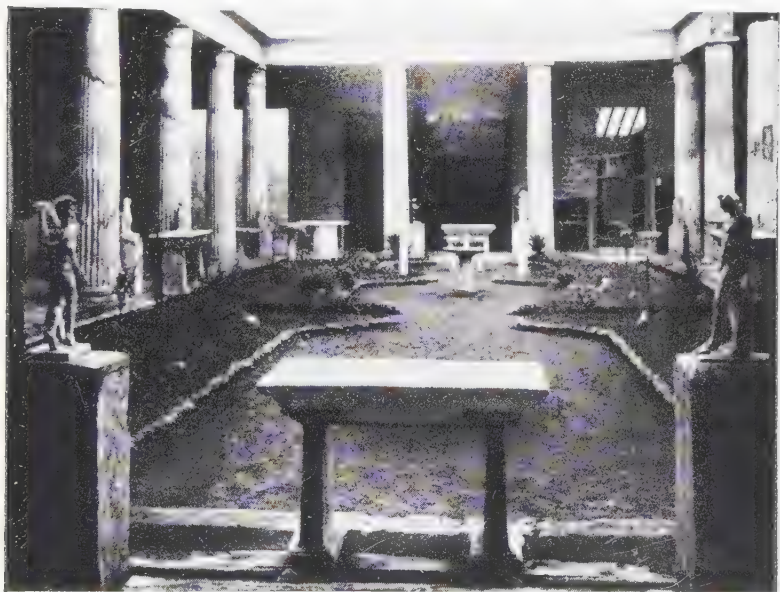


FIG. 26.—POMPEII. HOUSE OF THE VETII. PERISTYLE.

the river Gard on a bridge some 900 feet in length and about 180 feet high. The arches of which it consists were very ingeniously constructed, each one being in vertical layers or slices that were built separately but face to face. By this means, it was possible to erect the slices one after the other using the same centering for each one with a considerable saving in cost. In contrast with the other Roman buildings that have been noticed, the *Pont du Gard* shows no attempt to secure decorative effects by applied ornament. None the less, there is a high degree of formal beauty in the fine proportions, the skillfully varied dimensions of the two bottom ranges of arches and the strong rhythm set up in the heavy

piers, the whole composition being topped off by the smaller arches of the top level. Comparison with a modern bridge (Fig. 121) reveals the close parallel between the methods and effects of modern engineering and its Roman prototype.

No account of Roman architecture would be complete without some mention of triumphal arches (Fig. 28). A considerable number are preserved, all of which were erected to commemorate military or political achievements of the Roman emperors. One of the best known is that near the Roman Forum which celebrated the



FIG. 27.—NÎMES. THE "PONT DU GARD."

conquest of Jerusalem by Titus in 70 A.D. The illustration shows one at Benevento near Naples erected in 114 A.D. in honor of Trajan whose beneficent rule had been recognized by special distinctions heaped upon him by the Roman Senate the year before. It stands across the old Roman road from Rome to Brindisi and is a larger version of the Arch of Titus. It is comparatively simple in design, consisting of two massive piers joined by a barrel vault below a heavy attic story. Between the upper and lower parts is a complete entablature with figured frieze supported by columns with Composite capitals. The whole structure is lavishly decorated with relief sculpture in which the emperor's policies and achievement are set forth allegorically. Later examples of the Roman

triumphal arch are usually more ostentatious in design and ornament than that at Benevento with several ranges of arched openings and a wealth of sculptured decoration.

Up to this point, the discussion of Roman architecture has brought out the fact that very different types of buildings are found in it than in Greek architecture. The contrast between the two styles extends to the treatment of details also, as has been



FIG. 28.—BENEVENTO. TRAJAN'S ARCH.

pointed out in the comparison of the Roman and Greek orders. Closely allied to this is the contrast between the structural function of the column in Greek design and its decorative one as employed by the Roman. Because the latter was accustomed to employ the column as a decorative feature, he saw no reason why it should not be combined with the arch as in the Colosseum (Figs. 20 & 29) where the column and entablature serve as a frame for the structural arches. From this, the idea was developed of using the two forms together with the arch springing from the entablature of the order as in the niche opposite the entrance portal of

the Pantheon (Figs. 24 & 29). This suggests that the Roman architect was attempting to establish a definite structural relationship between the column and the arch by combining the principles of the post and lintel and arch systems of construction. The next step toward that end is seen in the vaulted baths (Figs. 22 & 29) where the entablature is entirely omitted except for a section over the column itself, and it is finally attained in the great palace erected by Diocletian at Spalato in Dalmatia about 300 A.D. In the first of the three examples from Spalato in the illustration (Fig. 29), the relationship of arch and column that appears in the

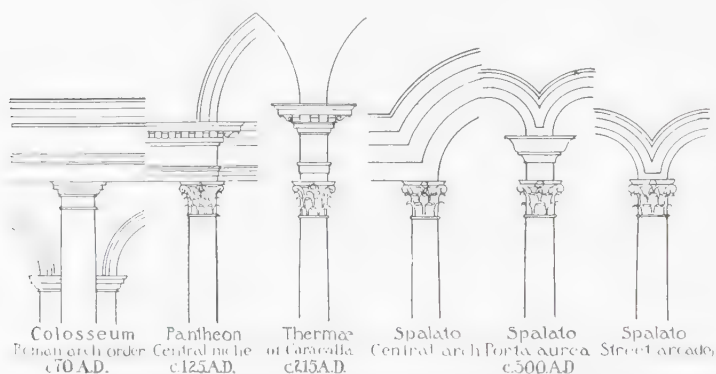


FIG. 29. DEVELOPMENT IN THE RELATIONS OF ARCH AND COLUMN IN ROMAN ARCHITECTURE.

central niche of the Pantheon has been modified by making the mouldings of the entablature and arch continuous. In the second one, the entablature section used over the columns in the baths has been reduced to a moulded stilt-block. In the third, even the stilt-block is omitted and the arch springs directly from the capital of the column. In this way, the arch and column are given a definite structural relationship. In Greek design, the column has a structural relation only with the lintel. In Roman design, the arch and column are first given decorative unity which becomes structural through the development that has been outlined. Upon this structural relationship of arch and column many of the effects of medieval architecture are based; its achievement was one of the most significant accomplishments of Roman architecture.

No less important is the idea embodied in Roman architecture

of a concept of space as a powerful factor in determining architectural form. One result of this was to make the interior effect of equal importance with the exterior. In no respect do the aims of Greek and Roman architecture differ more profoundly than in the reduction of space in the former and the emphasis upon it in the latter. In the interior of the Pantheon, for example, the essential element is the space enclosed. The walls and dome merge into a unified and coherent whole through the over-arching lines of the coffers, articulating the enclosed space into a plastic and objective thing.

Of all the historical styles, the Roman is the nearest to modern tastes. Its utilitarianism, its striving for big and massive effects and its frank divorcing of structure and ornament all have parallels in much contemporary building. In striking contrast to Greek architecture, it produced monumental results in a great variety of buildings, creating types that have proven capable of adaptation to the needs of other and later civilizations. The football stadium of today is only a variation of the Roman amphitheatre. The great baths served as models for the concourses of innumerable railroad stations, notably that of the Pennsylvania Station in New York whose design is based directly on that of the Baths of Caracalla in Rome. The eminently practical Roman solved his architectural problems almost entirely with an eye to the functional efficiency of his structures, finding beauty in effects of size and ostentatious ornament which rise to greatness through the powerful spatial volumes to which they give scale and adornment. By acknowledging these as a vital factor in architectural design, the Roman made a contribution to the art of building which is of equal importance with the sense of design dominant in Greek architecture.

CHAPTER V

EARLY CHRISTIAN ARCHITECTURE

ROMAN architecture became the outstanding style in the Mediterranean world when Greece was overpowered by the Roman armies, only to be replaced in turn when the vitality of the civilization it symbolized became weak and decadent. The style that grew up after it was the instrument of a spiritual rather than a worldly entity, the Church. In 312, Christianity had been placed on an equal footing with the pagan cults in Rome. In 323, it was established as the state religion, and in the ensuing years, it became so powerful that when the Roman Empire toppled before the barbarian invasions in the 5th century, the Church remained firmly established. It was only as a handmaiden to it that architecture existed in western Europe during the Dark Ages from the fall of Rome until about the year 1000 A.D. The same was true in eastern Europe as well. In 330, a second capital of the Roman Empire had been established at Constantinople. It became the center of a notable civilization, dominated by the Church, which was thus the greatest power in both eastern and western Europe. For this reason, architecture in Europe is predominantly religious during the period about to be considered, from the beginning of the 4th century to the time of Charlemagne at the end of the 8th. The style developed in the west is called Early Christian, the one in the east Byzantine.

There is no sharp distinction between Early Christian and Roman architectural practice as far as comparable effects are concerned, for the Early Christian buildings, of which the majority are in Rome itself, have many characteristics in common with Roman ones. The most important differences between the styles are to be seen in matters having to do with construction. Vaults are rarely found in Early Christian buildings, probably because the skill necessary to construct them had vanished as the power and prestige of Rome declined. The form of the Early Christian church seems to have been determined by elements drawn from a number of sources, the Roman house having supplied some

and the basilica still others. It may seem strange that the founders of the Christian Church did not hesitate to borrow pagan ideas in establishing the earthly homes of their belief. In this respect, Early Christian architecture and the theology of the early Church are very similar for there are as many elements drawn from pagan beliefs in the latter as there are Roman architectural forms in the former. Furthermore, at the time that the first Christian churches were constructed in the west, practical considerations weighed more heavily than spiritual scruples. The Church was urgently in need of its own buildings in which the cult might be properly celebrated and drew upon all available sources for ideas of design as well as for constructive materials. This fact was responsible not only for the general form and details of the Early Christian churches but also for much of the undeniably poor construction that appears in them.

The *Old Church of St. Peter* in Rome was one of the first buildings of the Early Christian style. It was begun in 324 and consecrated in 326. The name distinguishes it from the present structure which was erected in the 16th century when the Early Christian church begun by Constantine was completely demolished. The plan (Fig. 30) consists of two principal parts, the atrium and the church proper.

The atrium is an open courtyard surrounded by covered galleries with a fountain in the center, repeating on a monumental scale the part of a Roman house which bore the same name. It was the place where persons could assemble who were not permitted to take part in the celebration of the rites which took place in the church, such as the penitent and the unbaptized. Architecturally, the atrium served to seclude the building from the tur-

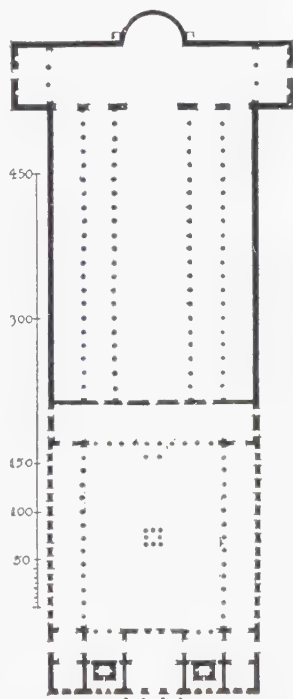


FIG. 30.—ROME, OLD BASILICA OF ST. PETER. PLAN.

moil of the street. The gallery next to the front or façade of the church was further distinguished as the narthex. Inside the church itself, there are five longitudinal divisions indicated by rows of columns. The large central one is the nave and the two smaller ones that flank it are the side aisles. The number of the latter varies with the size of the church; St. Peter's had two on each side of the nave; smaller churches had but one on each side and in some of the very smallest, there are none. At the end of the nave and side aisles is another space whose axis is at right angles to their own. This is the transept, a feature found only in the largest Early Christian churches. The ends of the transept sometimes projected beyond the side aisle walls as here. The semi-

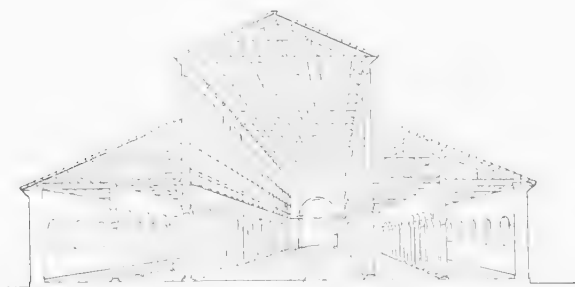


FIG. 31.—ROME. ST. PAUL'S OUTSIDE THE WALLS. SECTION IN ELEVATION.

circular projection from the transept opposite the end of the nave is the apse. In it the bishop's throne was placed, behind the main altar of the building.

This type of church is known as a basilica. Its importance is indicated by the persistence with which Christian churches have clung to the basilican form. The church was usually oriented, that is the façade faced the west with the apse at the eastern end. In consequence of this, the transept to the left of an observer facing the apse is often referred to as the northern one and the other the southern. Some of the earliest Christian churches were not oriented in this manner, but it became a fixed practice to arrange them so at an early date; during and after the medieval period any other disposition is the exception rather than the rule.

The elevation or vertical design of the Early Christian church (Fig. 31) is in two parts, the nave arcade and the clearstory. The

former is the row of columns supporting arches or an entablature between the nave and the side aisles and is doubled in those churches which have two side aisles on each side of the nave such as Old St. Peter's or St. Paul's-outside-the-Walls in Rome. The clearstory is the wall supported by the nave arcade which is pierced with windows to illuminate the nave. The side aisles are lighted by windows in the wall which supports the slanting roof over them.

The construction of the Early Christian basilica was very simple. In the first ones to be built, the nave arcade consisted of columns bearing a horizontal entablature. Later semi-circular arches replaced the entablature (Fig. 31), the arches springing directly from the capitals as in late Roman buildings (Fig. 29). Over the apse is a half-dome of masonry but the nave and side aisles are invariably covered with trussed wooden roofs which are sometimes concealed by elaborately decorated ceilings. A building covered in this fashion represents an application of the post and lintel principle for the only force involved is the downward pressure of the roof. This was about the only constructive method available to the Early Christian builder, who lacked the necessary engineering skill to erect a stone or concrete vault. Furthermore, wood was plentiful and a trussed roof could be constructed more easily, rapidly and cheaply than a vault or dome. All of these considerations weighed very heavily, even though a wooden roof made the building it covered liable to destruction by fire. That this was a real hazard is indicated by the frequency of recorded burnings of such buildings. To avoid it was a major problem for later builders and the methods by which it was solved constitute the chief points of difference between Early Christian construction and that of the later Middle Ages, with results correspondingly different in effect from the basilica.

The exterior of the Early Christian church is rarely impressive (Fig. 32). The brick or coarse stone of which the building was constructed did not lend itself naturally to striking effects, and the expense of covering it with a layer of marble as the Romans had done was prohibitive. As a general rule, the stark monotony of the walls is relieved only by arcades framing the clearstory and side-aisle windows. These have an important function, however, to establish a horizontal movement in the design, the eye being

led in a definite rhythm from one arch to the next. The significance of this movement lies in its relationship to a similar one in the interior which will be discussed shortly.

The Early Christian builder was chiefly concerned with the interior of his structure. A characteristic example is that of the church of *Sant' Apollinare in Classe* at Ravenna (Fig. 33). The clearstory wall was originally decorated entirely with mosaics, scenes and figures worked out in pieces of colored glass or marble held fast in the plaster of the wall. Mosaic was also applied to the



FIG. 32.—RAVENNA. SANT' APOLLINARE IN CLASSE. EXTERIOR FROM THE APSE.

semi-dome of the apse and the end wall of the nave. In the Early Christian churches in Rome, the floors were also decorated, large pieces of colored marble being laid to form elaborate designs. In the apse stands the altar of the church, covered by a canopy or ciborium. It is the focal point of the entire interior design for on it converge the horizontal rhythms of the nave arcades. In this way, the reason for the existence of the building is made evident by its form, the interior and exterior arcades both emphasizing by their movement the importance of the altar as the heart of the design. In subordinating the exterior effect to that of the interior, the Early Christian style continues the tendency noted in Roman

architecture; the interior aspect is the important one, the exterior relatively insignificant.

Another characteristic of Early Christian building should be mentioned, *viz.*, the practice of using materials pilfered from Roman buildings which were incorporated in the Christian ones without any changes in form. The columns and entablatures thus obtained frequently did not agree in style or detail, and as a consequence of this practice, it is not unusual to see three or four different types of columns in one nave arcade or as many varied

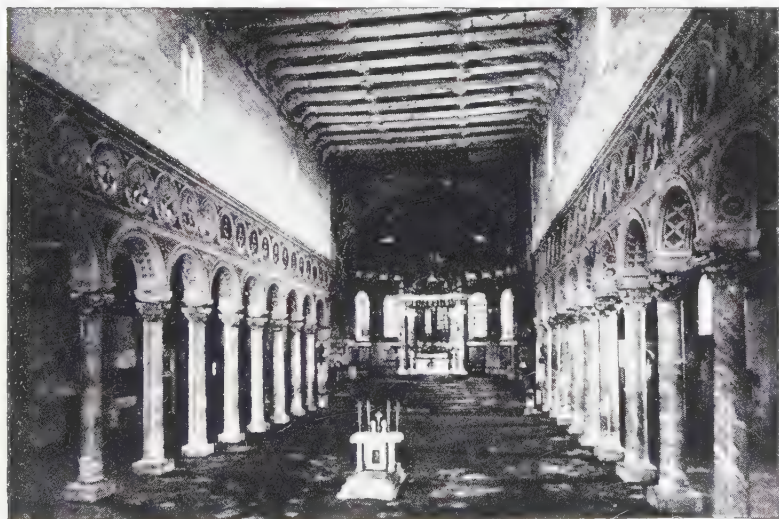


FIG. 33.—RAVENNA. SANT' APOLLINARE IN CLASSE. INTERIOR.

decorative patterns in a single entablature. A characteristic example is seen in the church of St. Lawrence-outside-the-Walls at Rome.

In general, Early Christian architecture displays a striking lack of self-consciousness. Its forms were developed in response to functional requirements and not in accordance with the esthetic considerations which so largely determined the Greek and Roman styles. Early Christian architecture also indicates the beginning of that submergence of the individual in the mass of society which is an outstanding feature of the Middle Ages. The Christian basilica was a communal enterprise in the truest sense of the

term. It was built for and sometimes by those who worshipped in it, for they often gave the strength of their physical bodies as willingly to the task of its construction as they put their souls in the custody of the Church. Furthermore, it should be noted that the Early Christian style was the result of an apparently infinite capacity for compromise and adaptation. As has been mentioned, the theology of the Early Church included many concepts that were taken from contemporary pagan cults and Early Christian architecture in similar fashion employed anything of pagan architecture that served its ends.

CHAPTER VI

BYZANTINE ARCHITECTURE

THE Byzantine style of architecture has been mentioned above as having been contemporary in eastern Europe with the Early Christian style in the west. It lasted much longer, however, for some of its monuments were erected as late as the middle of the 15th century. Apart from a general similarity in program, there is little in common between Early Christian and Byzantine architecture either in methods of construction or effects.

The arch is the chief constructive principle in Byzantine architecture, the developed form known as the dome being employed for monumental effects. The dome is a logical device to use in covering a square or circular building but it is found in the Byzantine style even over buildings whose longitudinal axis was the most important one, such as the basilica. When used in this way, a series of domes and half-domes was built so that they buttressed each other with respect to the thrusts in the direction of the major axis of the structure. The thrusts at right angles to this axis were offset by masses of masonry. The use of a dome to cover a rectangular space necessitated its division into squares if it were not already in that form. The primary problem of the builder was to fit the dome to the square space it was to cover.

The difficulty of doing this will be apparent if a circle be visualized whose diameter is equal to the diagonal of the square to be covered. If a dome were erected on that circle as a base, it clearly would be supported only at the corners of the square. If the circle is equal in diameter to the *side* of the square, then it will be supported by it only at the points where its circumference touches the middle of each side. In either case, the relationship between the dome and the supports which form the corners of the square would be a very awkward one.

One method of solving this difficulty was the squinch. A squinch is built by laying a lintel over each corner of the square, producing an octagon. The process is then repeated, forming a sixteen-sided figure and can be prolonged indefinitely until the square be-

comes a many-sided polygon approximating a circle upon which a dome can easily be erected. This method of turning a square into a circle is not a very effective one, however, either in theory or appearance. It is a makeshift at best and appears only rarely in the developed Byzantine style.

The most satisfactory method of fitting a circular dome to supports which form a square is by the spherical pendentive. In geometrical terms, a pendentive is a triangular section of a hemisphere whose diameter is equal to the diagonal of a square inscribed in its largest section. The illustration (Fig. 34) shows the way in which it is employed. The pendentives are the curved section between the four arches which are the sides of the square base. Their form is theoretically determined in this way. A dome equal in

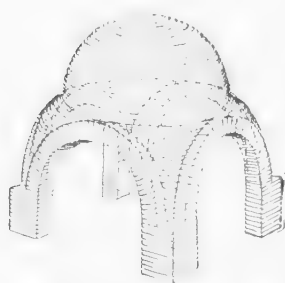


FIG. 34.—THE DOME ON PENDENTIVES.

diameter to the *diagonal* of the square base is considered as having the portions cut off vertically which project over each side of the square. This produces a continuous dome on pendentives which solves the problem of a dome over a square space but which is too low to be completely satisfactory in appearance. If this dome is then considered as cut off horizontally at the level established by the crowns of the four arches of the base, the result will be a circle, equal in diameter to

the *side* of the square to be covered and supported by four arches which are joined by four pendentives. With this circle as a base, a full dome can easily be built, as represented in the illustration. Or if it is desired to raise it even higher, a cylinder or drum of any height can be erected on the base and the dome placed on that. Once the dome is constructed, its stability must be assured by buttressing. The necessity for this can be understood if the dome is imagined as a number of arches, intersecting each other at a common center, and each with its own lateral thrusts.

The most impressive example of a dome on pendentives is that in the church of *Hagia Sophia* or Divine Wisdom in Constantinople (Figs. 35-37). It was begun by Justinian in 532 to replace an earlier structure destroyed by fire and was dedicated on Dec. 26, 537, the architects being Isidorus of Miletus and Anthemius of

Tralles. The church is rectangular in plan (Fig. 35) and was originally provided with an atrium and narthex of which the latter only now exists. The nave (Fig. 36) is covered by a complete dome, in the center, flanked by two half-domes. The central one rests on four arches, connected by spherical pendentives and supported by four huge piers some twenty-five feet square. The half-domes to the east and west of the main one buttress its longitudinal thrusts and combine with it to establish the main axis of the building. Each of the half-domes is buttressed in turn by three smaller ones. This arrangement furnishes a well-integrated system by which the thrusts of the main dome are transmitted to the outer walls of the building which are very massive and absorb the thrusts easily. The side thrusts of the central dome are not so readily disposed of. Two tremendous walls added later at right angles to the main axis of the building are supposed to perform this function. They are visible on the exterior (Fig. 37). Although of great size, they have not been entirely successful in counteracting the lateral pressure of the dome upon the side walls of the building in which serious displacements have occurred. The side aisles and galleries of the interior are covered with groined vaults.

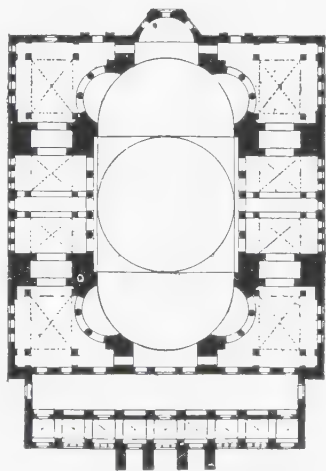
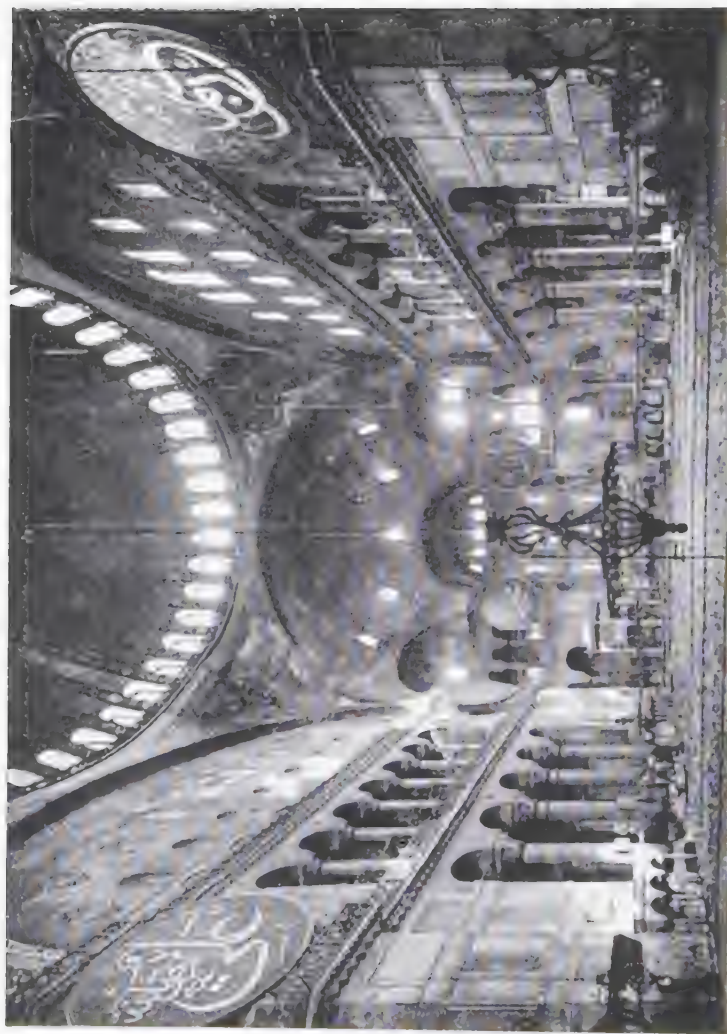


FIG. 35.—CONSTANTINOPLE.
HAGIA SOPHIA. PLAN.

As in Early Christian architecture, the exterior is definitely subordinate in interest to the interior in Byzantine design. That of Hagia Sophia has been modified by the four slender minarets added by the Turks when the building was changed into a Mohammedan mosque after the fall of Constantinople in 1453 and these must therefore be left out of account in determining its effect. There is little impression of the great height of the central dome whose crown is nearly one hundred and fifty feet above the pavement of the interior. The inability to grasp the true proportions of the dome from the outside is due in part to its form which



119. D.—CONSTANTINOPEL. HAGIA SOPHIA. INTERIOR.

is considerably less than a hemisphere. The diameter of the circular base is one hundred and seven feet, but the crown of the dome is less than half that height above the level of the springing. As a result of this, from the outside it appears crowded down between the heavy buttresses (Fig. 37). These latter are very impressive in their massive proportions, but if the building were to be consistent in effect both within and without, the dome should be higher and more prominent in the exterior design. To achieve



FIG. 37.—CONSTANTINOPLE. HAGIA SOPHIA. EXTERIOR.

this, it would have had to be raised on a drum or built as a complete hemisphere. In either case, the buttressing would have been made even more difficult, and as has been mentioned, it is hardly more than adequate in its present form.

The decoration of the interior (Fig. 36) is very rich, the columns supporting the groined vaults and the aisle galleries being of colored marble, many of them from Roman buildings. The lower walls are covered with marble panels forming a decorative pattern by the natural markings, thin slabs cut from the same block being placed in such a way that the veining is reversed in adjacent sections. Above the lower levels, the penden-

tives and domes are covered with mosaic, the figures standing out against a background of gold. In the illustration, only the great archangels in the pendentives can be seen, for most of the figure ornament of Hagia Sophia was covered by a layer of white-wash or otherwise obscured when it was converted into a Mohammedan mosque.

The effect of the interior is almost overpowering. The first impression is of a single vast domed space; as the relationship of the minor domes and the galleries to the central cupola becomes more clear, it gives way to one of greater complexity. The sense of great size is never lost, however, because of the skillful placing of the columns on the ground story and in the galleries. By them, the whole interior is given scale, a means by which its monumental proportions can be grasped. A very important factor in the interior effect of Hagia Sophia is the way in which it is lighted. The illumination is managed chiefly by the row of windows at the springing of the dome which seem almost to separate it from the rest of the structure. Procopius, a writer describing the building shortly after it was completed, said that the dome appeared "as if suspended by a chain from heaven." Even in the present sadly debased condition of the building, it is easy to appreciate the feeling that made Justinian exclaim as he stepped inside the portals, "Glory be to God who has thought me worthy to finish this work. I have surpassed thee, O Solomon!"

Examples of the Byzantine style are not limited geographically to the Near East. In Ravenna, the principal outpost of the Eastern Empire in Italy, a number of buildings reveal the influence of Byzantine ideas. The Church of *San Vitale* in that city is one of these (Fig. 38). It was begun in 526 and dedicated in 547. The plan is octagonal, and the structure is covered by a dome fitted to the octagonal base by squinches. The illustration reveals a number of Byzantine characteristics. The lower walls are faced with slabs of marble and the upper levels covered with mosaic. The capitals are a typical Byzantine form, cubical, with the bottom face reduced to a circle to fit the shaft. The resulting basket shape is carved with various patterns cut into the surface of the stone and the background painted black to make the design stand out more clearly. The object on the capital itself which looks like a second capital is a stilt-block or pulvin. Its function is to reduce the lower face of the springing of the arch to an area approxi-

mately the same as that of the top of the shaft, thus preventing it from seeming too heavy for the delicately carved capital. This should be compared with Roman methods of handling the same problem (Fig. 29). Similar capitals appear in the nave arcade of



FIG. 38.—RAVENNA. SAN VITALE. INTERIOR.

Sant' Apollinare in Classe (Figs. 32, 33) at Ravenna. It has been described among the examples of Early Christian architecture for it is of the western or Latin basilica type. Its decorative details, however, are Byzantine.

Probably the best-known example of Byzantine architecture is the church of St. Mark's in Venice. Begun in 1063, it was not completed for many years. Its plan is in the shape of a Greek

cross, with four arms of equal length. Five domes cover the structure, one over each arm and one over the crossing, all being supported on pendentives. Inside, the decoration is very striking, consisting of mosaic, marble columns and a veneer of marble slabs on the walls. It is equally lavish outside, differing in this respect from the other Byzantine structures that have been mentioned, but the present exterior belongs to a period much later than that of the original construction from which it represents a considerable change.

In Byzantine architecture as in Early Christian, the interior aspect is the one of greatest importance. It thus represents, with the contemporary western style, the completion of the transition begun in Roman architecture from the exterior point of view which was the controlling factor in Greek design. Unlike the Early Christian style, the Byzantine employs forms somewhat similar to Roman ones to achieve its ends. In both the Pantheon and Hagia Sophia, for example, the dome is the dominant, unifying element. In both, this results in a powerful effect of enclosed space, but with this, the similarity of the two buildings ends. In Hagia Sophia, the space inside the building is isolated, but it is intangible. In the Pantheon, space is made objective by the curving surfaces of the dome and the play of light and shade created by the recessed coffers. Furthermore there is always a sense of the brick and concrete of which the building is constructed as definite and real things. In Hagia Sophia, the opposite is true. The mosaics of the dome and the pendentives have the effect of submerging the solid and tangible walls and construction in unsubstantial color and glowing golden light. The sense of immateriality thus created is completed by the effect of the tremendous dome which seems to hover above the pendentives instead of resting on them. The total experience is as intangible and spiritual as that of the Pantheon interior is specific and material.

The interior of an Early Christian basilica produces a very similar effect but by different means (Fig. 33). The regular spacing of the nave arcade columns creates a rhythm that carries the eye in a definite horizontal movement, just as in the Byzantine structure, a sense of space is achieved by the relationship of the niches and half-domes to the great central cupola. The space in the latter is rendered intangible by the abstract color effect of the mosaic; the movement of the former ends in a similar abstrac-

tion in the blue and gold of the apse. The rhythmic progression of form which appears in the peristyle of a Greek temple (Fig. 15) is achieved in much the same way as in the nave arcade of the basilica, but in the Greek building, its purpose is to emphasize the concrete form of the building, while in the church, it is subservient to the abstract color effect of the mosaic decoration in the apse.

The basic elements of Early Christian and Byzantine architectural design are thus the same as those of the Greek and Roman. The Greek sought for an effect of form in his buildings and the Roman for a sense of space; in both styles, these basic elements were made concrete and objective. In Early Christian and Byzantine architecture, effects of form and space are also sought by the builders, but as abstract and intangible or illimitable things. The change in point of view is significant. The classic world valued the evidence of concreteness supplied by the senses above all else; the Church valued it not at all, considering the only thing of importance to be the intangible experience of the spirit. This is the foundation of all medieval thought, for many years were to pass before the Renaissance gave back to Man a willingness to believe the reality of what he saw.

CHAPTER VII

ROMANESQUE ARCHITECTURE

THE Early Christian and Byzantine styles represent the first attempt by the Church to adapt classic architectural forms to new functions. They are manifestations of the same point of view that framed the theology of the Early Church by striving to clothe the spiritual ideals of the new faith in the garb of classic thought. In both architecture and theology, the antagonism between the antique spirit that had created the forms and that which sought expression by means of them was too fundamental to be overcome. Just as long as Christian architecture was forced into a classic mould, so long did it fail to attain perfect integration of design and function, just as the dialectic of the classic philosophers could never be an adequate vehicle for the expression of Christian ideas. Thus because the varied elements of European thought from the fall of Rome until about the year 1000 were not integrated in any sense of the word, there is a notable lack of monumental achievement during those years in every field of human activity. They were the black night that preceded the dawn of the modern spirit in the western world.

A single ray of light appears in the pervasive gloom of the Dark Ages. During the last years of the 8th century, Charlemagne's determined effort to re-establish the glory that had been Rome produced the short-lived Carolingian Renaissance which left its mark on the history of European architecture in *Charlemagne's Chapel* at Aix-la-Chapelle (Fig. 39), erected between the years 796 and 804. It is an octagonal structure, the design being based on that of San Vitale in Ravenna (Fig. 38), tacit evidence of the vitality of the Byzantine style long after the Early Christian had lapsed into unoriginal variations of the basilican form. None the less, the Carolingian structure falls far short of its prototype in effect. The magnificent mosaic and marble decoration of San Vitale was omitted at Aix-la-Chapelle because Charlemagne was unable to find workmen capable of executing it. Even the construction was simplified and in the final analysis, the effort made by

the great emperor to re-vitalize old architectural forms was no more successful than his attempt to re-create the political structure of the Roman Empire. The failure of the Carolingian period to integrate its thought, either political or architectural, was due to the basic incapacity of classic forms to express the thought of a social order made up of classic, Christian and barbarian elements.



FIG. 39.—AIX-LA-CHAPELLE. CHARLEMAGNE'S CHAPEL. INTERIOR.

The elements themselves were mixed but not amalgamated; as a result, the art forms by which the society thus formed attempted to express its ideas lack the unity essential to monumental effect.

Through the entire period of the Dark Ages, the Church was the only stable institution in a world of shifting values. Within its walls, surcease could be found from the trials of life in a society which was in a state of ceaseless flux. In the cloistered monasteries, away from the cares of the outside world, the soul that longed

for peace and permanence found refuge. In them was cherished all that remained of the once vigorous life that pervaded the thought of classic antiquity. From that carefully nurtured organism, there grew up a new synthesis of thought which made its appearance first about the year 1000.

The effect of this synthesis on architecture is suggested in a striking passage in the chronicle written by Raoul Glaber during the 11th century in which he likens the effect of the churches that were built to a white blanket spread over all Europe. This amazing apparition has sometimes been accounted for as a reaction that took place when the popular belief was disproved that the second coming of Christ and the world's end would occur in the year 1000. A more satisfactory explanation is that the integration of thought that had been lacking before was finally taking place. Charlemagne had attempted to bring about such an integration and had failed. Now it was taking form in a natural way. With it came the need for expression always felt when there is a definite consciousness of a deep significance in Man's experiences of life.

The period in which this expression first began to assume definite form is called the Romanesque. It lasted from about 1000 until 1200, although in some regions the style had given way to the subsequent Gothic mode as early as 1150 while in others it persisted long into the 13th century. This period is known as the Romanesque because the influence of Roman thought was an important factor in determining all its characteristics. This was only natural for all western Europe was peopled at this time by races of mingled Roman and barbarian stock. The common language was Latin, varied in different regions by local barbarian idioms. In fact, the closest parallel to Romanesque architecture is found in the Romance languages. All based on Latin, they are distinguished from each other by local differences which produced the modern Latin dialects of French, Italian and Spanish. In the same way, Romanesque architecture, while based on that of Rome, appears in many different forms which are due to modifications of the basic Roman style by the influence of local traditions. Thus there is not one Romanesque style but many, all related to each other through their common origin. Such variety in a single general style provides a striking contrast to the almost monotonous Roman manner. An arch of triumph in France is almost exactly

the same as one in Africa; an aqueduct in Spain differs in no essential from one in Italy.

A typical Romanesque ground plan (Fig. 40) reveals some points of similarity with that of the Early Christian basilica (Fig. 30). The body of the church is made up of a nave and two side aisles, separated by arcades. There are usually transepts but not invariably. A point of difference from the basilica is seen in the extension of the nave and side aisles across the transept at the end of which the apse appears. The extension of the nave forms the choir; its original function was to supply the space required in monastic churches for the people taking part in the service whose number was considerably greater than it had been in the earlier period when the apse alone had been large enough for this purpose. The side aisles of the Romanesque church were often carried around the end of the choir, forming an ambulatory, enabling pilgrims and visitors to the church to look at the sacred relics that were usually its most valued possessions. These relics were placed in shrines in the small apses or absidioles that open out from the ambulatory and the transepts.

In elevation, the Romanesque church also reveals points of contrast with the Latin basilica. In the latter (Fig. 31), a considerable area of blank wall appears between the nave arcade and the clearstory windows which was usually decorated with mosaic or paintings. In more northerly regions, this mode of decoration was not so general and to relieve the unsightliness of a blank wall, a second arcade was often cut in the wall itself (Fig. 41). This motive also had a functional value since it lightened the weight of the wall on the nave arcade below, and permitted light from the side-aisle windows to penetrate into the nave. Such a series of openings between the clearstory and the nave arcade is called a triforium gallery. In the developed Romanesque style, the function of the triforium is considerably expanded. It sometimes replaces the clearstory; in certain schools it does not appear at all, but usually all three parts of the elevation are found (Fig. 51).

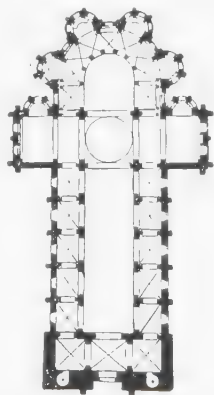


FIG. 40.—CLERMONT-FERRAND, NOTRE-DAME DU PORT.

The construction of the first Romanesque churches shows very little development from that of the Early Christian basilica. The church at *Vignory* in France (Fig. 41) was built about 1050. The three-part elevation in the interior has already been mentioned. In the distance is the semi-dome over the apse and the columns that separate the choir from the ambulatory. A little nearer, at the end of the nave, is the crossing formed by its intersection with the transepts. The nave is covered with a wooden roof on



FIG. 41.—VIGNORY, CHURCH. INTERIOR.

trusses and the side aisles are also roofed, as in the basilica (Fig. 31). Two points of difference from the basilican type should be noted. The first is in the nave arcade which consists of arches supported on piers instead of columns. A pier is distinguished from a column by greater massiveness and in being built up in layers or courses of masonry in some form other than circular. It was the preferred method for supporting arches in the Romanesque style, almost entirely replacing the column. The second point of distinction in the Romanesque interior is the division of the nave into units or sections

called bays. Each one is that part of the elevation included between two piers. If the interior of Vignory be compared with that of Sant' Apollinare in Classe (Fig. 33), the distinction will be clear. The interior of the basilica gives the impression of being single and continuous; the Romanesque seems to be made up instead of a number of repeated units or bays.

The Cathedral at Pisa (Fig. 42) is an example of Tuscan Romanesque, the style found in central Italy. Again the nave is divided into bays, this time by the arrangement of the triforium gallery, columns being used in the arcade. In this respect, the Cathedral of Pisa resembles the Early Christian basilica as well as in construction for the wooden roof of the nave rests directly

on the supporting side walls. The decorative scheme is very different, however, for the mosaic of the Latin basilica is replaced by alternately light and dark bands of marble. Tuscany abounds in colored marble which has been employed in architecture of the region in all periods to attain strikingly individual effects. This

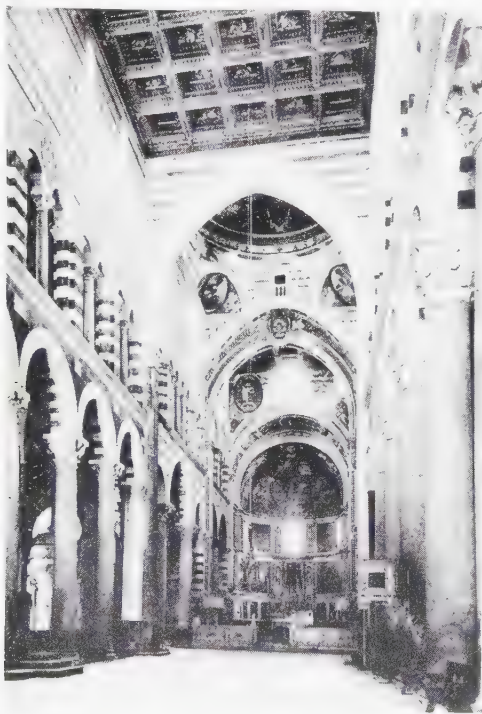


FIG. 42.—PISA. CATHEDRAL, INTERIOR.

is demonstrated by the exterior of the Cathedral at Pisa (Fig. 43) as well as the interior. Another characteristic feature of the Italian medieval church which appears here is the free-standing bell-tower or campanile. It can also be observed in the exterior view of Sant' Apollinare in Classe at Ravenna (Fig. 32). At Pisa, the campanile is the famous Leaning Tower. The entire group is unified in design by the arcades of colonnettes on both the Leaning Tower and the Cathedral, giving it, along with the

variegated marble employed, an appearance that contrasts strongly with that of the drab Early Christian exterior.

Both Vignory and Pisa have the disadvantages of the Early Christian basilica that result from the use of wooden roofs. One of these was the relative scarcity of wood in some parts of western Europe where the style could not be employed in consequence. Even more important was the liability of a wooden-roofed building to destruction by fire as has already been pointed out. It was chiefly to combat the latter that stone vaults were employed to

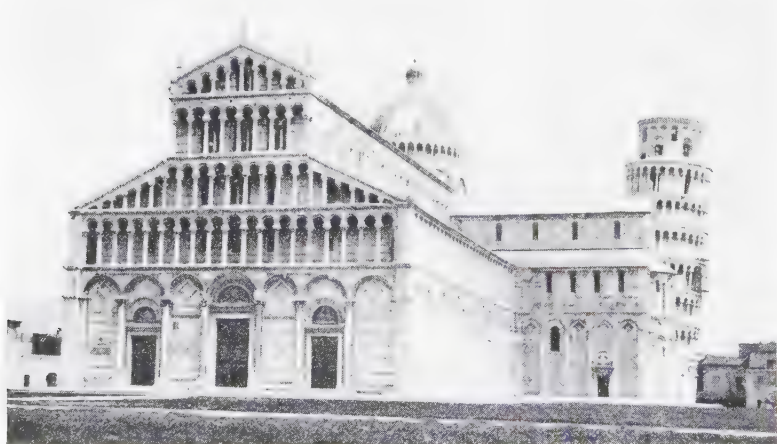


FIG. 43.—PISA. CATHEDRAL AND LEANING TOWER.

cover many of the Romanesque churches, although the former consideration also played a part in producing that result. The history of the Romanesque architectural styles is seen in the progressive steps taken to solve the problems attendant upon vault construction and the closely related one of providing adequate illumination for the interiors of the buildings they cover.

The church of *Notre-Dame du Port* at Clermont-Ferrand in France (Figs. 40, 44 & 45), built about the middle of the 11th century, is an example of the first phase of the Romanesque vaulting methods. The nave is covered by a barrel vault (Diagram A, Fig. 21). As has been noted before, vaulting of this type re-

quires buttressing for its entire length. In Notre-Dame du Port, the buttressing force is supplied by the half-barrel vaults over the triforium gallery (Fig. 45). The inward thrust of this vault meets the outward one of that over the nave; the combined thrusts are then carried by the masonry over the triforium vault to the heavy outer wall of the building whose weight is sufficient to absorb them and to stabilize the system. In some buildings, a full



(Photo Levy et Neurdein)

Fig. 44

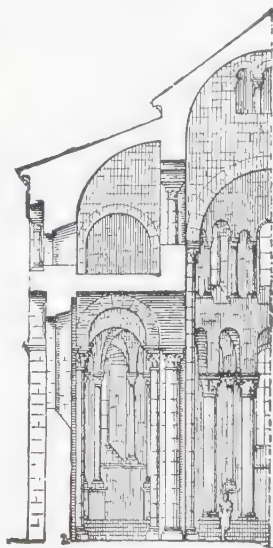


Fig. 45

FIG. 44.—CLERMONT-FERRAND. NOTRE-DAME DU PORT. INTERIOR.
FIG. 45.—CLERMONT-FERRAND. NOTRE-DAME DU PORT. TRANSVERSE SECTION.

barrel vault covers the triforium gallery instead of the half vault seen here, its structural, buttressing function being the same.

Groined vaults are also found in Notre-Dame du Port. They are used over the side aisles under the triforium galleries. In the plan (Fig. 40), they are indicated by the diagonal lines in each of the side aisle bays. Their construction is indicated in the vaulting diagrams (Fig. 21) and their appearance in the illustration of the north side aisle of the parish church at *Morizwal* (Fig. 46).

The barrel vault offered a satisfactory means of avoiding the fire hazard of a wooden roof but its construction was rather costly.

The side walls supporting it had to be very thick to absorb the lateral thrusts. Furthermore, until a barrel vault is completely built, it has to be supported by centering, the wooden scaffolding on which the fabric of the vault is laid. In a building of any size, nearly enough wood was required for centering as to construct an ordinary roof. Thus in regions where wood was scarce,



FIG. 46.—MORIENVAL. PARISH CHURCH. INTERIOR, NORTH AISLE.

Romanesque builders sought means by which a barrel vault could be constructed with a minimum of centering. Along with this went attempts to arrive at a vaulting method which would not require the excessively heavy side walls seen in Notre-Dame du Port.

Solutions of these problems offered by the plain barrel vault were found by the builders of *Saint-Sernin* at Toulouse (Fig. 47), which was begun in 1080 and finished during the 12th century. A

series of arches were built across the nave, connecting the piers directly opposite each other. These arches form a permanent support for the barrel vault which rests directly upon them. With this device it became possible to reduce the thickness of the buttressing side walls and also to lighten the vault itself. Furthermore, since the transverse arches divide the nave vault into sections corresponding to the bays, each bay could be erected as a separate



FIG. 47.—TOULOUSE. SAINT-SERNIN. INTERIOR.

unit with one set of centering serving for all of them in turn. As in Notre-Dame du Port, the lateral thrusts of the vault are buttressed by half-barrel vaults over the triforium gallery. Naturally these thrusts are slightly greater at the points where the transverse arches occur, so that the outer walls are strengthened at those points by strips of masonry called salient buttresses which rise the entire height of the wall on the outside.

The use of transverse arches provided a means by which the weight and costliness of construction of the barrel vault could

be reduced but there remained another very great disadvantage, the failure of the barrel vault to make provision for adequate illumination of the interior of the building. In both Notre-Dame du Port (Fig. 44) and Saint-Sernin (Fig. 47), the naves are very dark. There are no windows in the vault itself for its strength would be seriously impaired by any openings. The only direct light in the nave comes from the side-aisle windows and the doors, with a small amount also coming through the triforium windows. But none of the openings in the side wall can be very large as it has to be quite thick in order to sustain the combined thrusts of the nave and triforium vaults. Splaying the windows increases the light they admit but not very much. A clearstory above the triforium gallery would have met this lighting difficulty, but it was not possible to have one in either of the churches under consideration. A clearstory would have raised the nave vaults above those of the triforium and the latter would thus have been useless as buttresses.

The final solution of the problems facing the Romanesque builders in their vaulted structures was found in the use of the groined vault (Fig. 21). It is not difficult to see that groined vaults are readily adaptable to a space already divided up into units or bays as is the case in the Romanesque nave. Under such circumstances, the problem of an opening in the sides of the building is no longer a difficult one for the thrusts of the groined vault are concentrated at its corners and the whole space inside the arches that form its sides is available for windows if desired. Furthermore, the groined vault is even more economical to construct than the barrel vault with transverse arches for buttressing need be supplied only at the corners of the vault sections. This makes possible the lightening of the heavy walls which were required to support a barrel vault.

The groined vault had been known to the Roman (Fig. 22) and it was employed very early in the Romanesque period. It was used over the north side-aisle of the parish church at Morienvall (Fig. 46) about 1080, and even earlier in Notre-Dame du Port (Fig. 40). In both, it was built with transverse arches across the space to be vaulted. Why it did not occur to the Romanesque builder at the outset to enlarge this system and use it over the nave as well as the side aisles is a question to which the answer has not been found. It is possible that he was unaware of its

potentialities and the timidity natural in a period which was groping its way made him fear for the safety of a large vault, just as in the early stages of Egyptian and Greek architecture, forms of exaggerated bulk were employed in order to insure sufficient strength. In any event, the simple groined vault is found only rarely over the nave of a Romanesque church, exceptions being made for some in Burgundy in France. Its use is almost entirely restricted to the narrower side aisles as in the examples cited above.

It was not until a developed form of the groined vault was evolved that the Romanesque builder dared to use it over the nave of a church. This developed form is known as a ribbed groined vault. Structurally, it operates in the same manner as a simple groined vault to which it stands in the same relationship that a barrel vault with transverse arches does to a plain barrel vault, *i.e.* it is supported by a series of arches constructed beforehand upon which the web of the vault is laid. There are six of these arches in a ribbed groined vault; two run in the direction of the main axis of the nave and are the longitudinal ribs; two transverse arches run across the nave, perpendicular to the longitudinal ribs; two more run diagonally across each bay, following the groins, and are the diagonal ribs. When all of these arches are semi-circles and the vault is built over a square bay, this being usually the case in Romanesque architecture, the diagonal arches are greater in diameter than the side ones, and rise to a higher level above their common springing. As a result, the vault is domical in shape (Fig. 54).

The earliest extant example of ribbed groined vaults over the nave of a church is in *Sant' Ambrogio* at Milan (Figs. 48-50), which is a characteristic example of the North Italian or Lombard Romanesque style. Its vaults were almost certainly first built in the last quarter of the 11th century. The present ones date from a rebuilding toward the end of the 12th century but the plan of the structure shows that vaults very similar to these must have been in the mind of the architect from the beginning. The plan itself represents a modification of the basilican type (Fig. 48). There is the usual nave with two side aisles and a crossing covered with an octagonal dome on squinches, although transepts are missing. A short choir, flanked by two square bays that are extensions of the side aisles, ends in a great semi-circular apse with a

smaller one on either side. The elevation is in two parts (Fig. 49), the nave arcade and the triforium gallery. The nave vaults are of the ribbed groined type, supported by heavy compound piers which consist of a rectangular core with applied columns and pilasters. These applied members are the supports of the arches of the nave vaults, each one representing one of the ribs above. The organic unity of the design is due to this correspondence of every detail of the building to some requirement of the vaulting.

The nave vaults of Sant' Ambrogio are buttressed by the groined vaults over the triforium gallery which thus perform the same function as the half-barrel vaults of the triforium gallery in

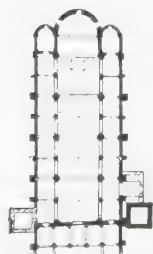


FIG. 48. — MI-
LAN. SANT'
AMBROGIO.
PLAN.

Notre-Dame du Port at Clermont-Ferrand (Fig. 45). The triforium vaults are not heavy enough to discharge this duty unaided, however. They are reinforced by heavy walls of masonry at right angles to the axis of the nave which connect the heavy compound piers with the outer wall of the building. These diaphragm walls, as they are called, convey the thrusts concentrated on the piers to salient buttresses by which they are diverted into the ground. The vaults are domical in shape since the bays of the nave are square and the diagonal arches consequently greater in diameter than the longitudinal and transverse ones. A sequence of domical vaults, like that in Sant' Ambrogio, is not very

pleasing in effect as it tends to mark off the nave too sharply into separate bays. This could be avoided by depressing the crowns of the diagonal arches and making the vaults of equal height for the entire length of the nave. The difficulty with this was the elliptical profile required for the diagonal arches in such circumstances, a form harder to build than the semi-circle. For this reason, appearance was sacrificed to facility of construction in the earliest examples of the ribbed groined vault.

Another detail of the interior of Sant' Ambrogio should be noticed. Instead of being uniform in size, the piers of the nave arcade are alternately large and small. The large ones support the ribs of the nave vaults with which the smaller ones apparently have no relationship. They are required by the vaulting of the side aisles and triforium galleries; without them, the bays of the

narrower aisles would be oblongs the length of the nave bays but only half as wide (Fig. 48). Now if a groined vault with



(Photo Clarence Ward)

FIG. 49.—MILAN. SANT' AMBROGIO. INTERIOR.

semi-circular arches were to be erected over such a space, it is obvious that three pairs of different sized arches would be re-

quired for each bay and that the vault web would have to be laid in three different levels. The effect of a vault built in this way can be seen in the north aisle of the parish church at Morienvall (Fig. 46). Although only a simple groined vault, its surfaces are warped and twisted in spite of efforts to make it level by springing the arches from different levels, indicated by the varying heights of the capitals, and by tilting the transverse arches.

Instead of attempting to solve the problem of vaulting an oblong bay, the builders of Sant' Ambrogio preferred to subdivide the difficult space into easier units by building smaller piers between the large ones supporting the nave vaults. From these smaller piers, transverse arches were sprung across the side aisles and triforium galleries which were thus divided into a series of small square bays, each side being half the length of one of the nave bays. It was a comparatively easy matter to cover these with simple groined vaults. The resultant arrangement of large and small piers is called an alternate system of supports. In Sant' Ambrogio, its effect is not entirely satisfactory for the small piers have no relationship to the main vaults of the building when seen from the nave.

In addition to their inability to achieve an integration of nave vaults and alternate system of supports, the builders of Sant' Ambrogio were unable to avail themselves of the capacity of a groin vault to provide for the better illumination of the space it covers than when a barrel vault is used. The interior (Fig. 49) is very dark for there is no clearstory. The inadequacy of the triforium vaults as buttresses for those of the nave has already been mentioned; the builders doubtless had this in mind and were justifiably timid about raising the heavy arches of the nave vaults above those of the triforium to provide a clearstory. This timidity may have been caused by the collapse of the first vaults of the building. In spite of the darkness of Sant' Ambrogio's interior, the importance of the vaulting system cannot be overestimated for it poses two basic problems of Romanesque construction, the covering of a building by a vault and its proper illumination.

The façade of Sant' Ambrogio (Fig. 50) is preceded by an atrium, one of the rare examples of this typical feature of the Early Christian basilica in Romanesque architecture. Like the side aisles of the interior, the galleries are covered with groined vaults buttressed by strips of masonry applied to the outer walls. The two-storied narthex constitutes the façade of the building. The

principal decorative motive of the exterior is the corbel table, a projecting course of masonry supported by small stone brackets which are often connected by arches. Corbel tables appear on the northern tower of Sant' Ambrogio and along the line of the raking cornice which is the slanting gable of the façade. One is also used in the interior between the nave arcade and triforium



FIG. 50.—MILAN. SANT' AMBROGIO. EXTERIOR.

gallery. It is interesting to note the comparative paucity of decoration on a Lombard building like Sant' Ambrogio in contrast to the exuberant ornament of the Tuscan Romanesque (Fig. 42). In the former, a monumental effect is attained by constructive means, in the latter by applied decoration.

In the nave vaults of Sant' Ambrogio, there is an indication of the way in which the basic problems of Romanesque construction could be solved, but their final solution was not reached there. Three characteristics of the design of Sant' Ambrogio are open to criticism; the domical vaults, the lack of a consistent relation-

ship between the vaults and the alternate system, and the darkness of the interior because of the absence of a clearstory. All of these undesirable traits were avoided by the builders of the church of *Saint-Etienne* at Caen in Normandy (Figs. 51-53). It was constructed in expiation of a vow made by William the Conqueror and served a monastery which has given it the more familiar appellation of *Abbaye-aux-Hommes*. Begun in the last part of the 11th century, it was dedicated in 1077. Originally it was covered with a wooden roof but about 1135, it was rebuilt with the groined vaults that appear in the illustration (Fig. 51). Comparison of this interior with that of Sant' Ambrogio will reveal at once the better illumination furnished by a clearstory above the triforium gallery which was made possible by establishing a definite structural relationship between the small piers of the alternate system and the nave vaults. In the plan (Fig. 52), it will be seen that the vault is in six parts instead of four as in Sant' Ambrogio (Fig. 47). The sex-partite vaults in the *Abbaye-aux-Hommes* are formed by springing a transverse arch across the nave from the small piers of the nave arcade. This is true only of the nave vaults for those of the choir are the result of a still later rebuilding. The extra transverse rib in the sex-partite system aids materially in supporting the vault and makes possible a considerable reduction in buttressing.

The sex-partite vault thus proved to be the solution of two of the three problems that were unsolved in Sant' Ambrogio, the relationship of the alternate pier to the vault and the raising of that vault above the triforium to permit a clearstory. It also offered a remedy for the third point, the domical shape of the vault itself, for it is clear that the vault crowns in *Saint-Etienne* are level. Now since the transverse and longitudinal arches of the vault are semi-circular, it follows that the diagonal arches with their greater diameters must be less than a semi-circle. This form of the arch is not as efficient structurally as a full semi-circular one would be since its lateral thrusts meet the buttressing force on a plane which is nearer the horizontal. It was possible to use it in the nave of the *Abbaye-aux-Hommes* only because of the added vertical support given the vault web by the transverse arch springing from the alternate pier.

The use of sex-partite vaults did not eliminate the problem of lateral thrusts, however. In *Saint-Etienne*, the nave vaults are buttressed by half-barrel vaults over the triforium gallery as in



(Photo Clarence Ward)

FIG. 51.—CAEN. SAINT-ETIENNE. INTERIOR.

Notre-Dame du Port (Fig. 44). Now it has been pointed out that one of the great advantages of the groined vault lies in the fact that its lateral thrusts are concentrated at the corners of each bay instead of being continuous. It thus needs to be buttressed *only at the corners*. This fact was known to the builders of Sant' Ambrogio for they strengthened the construction of the building by diaphragm walls joining those points, represented by the interior piers, with the exterior salient buttresses (Fig. 55). It was also observed by the builders of another church in Caen, the Abbaye-aux-Dames or La Trinité, erected for Matilda, the wife of William the Conqueror. It is similar to the Abbaye-aux-

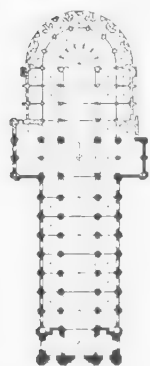


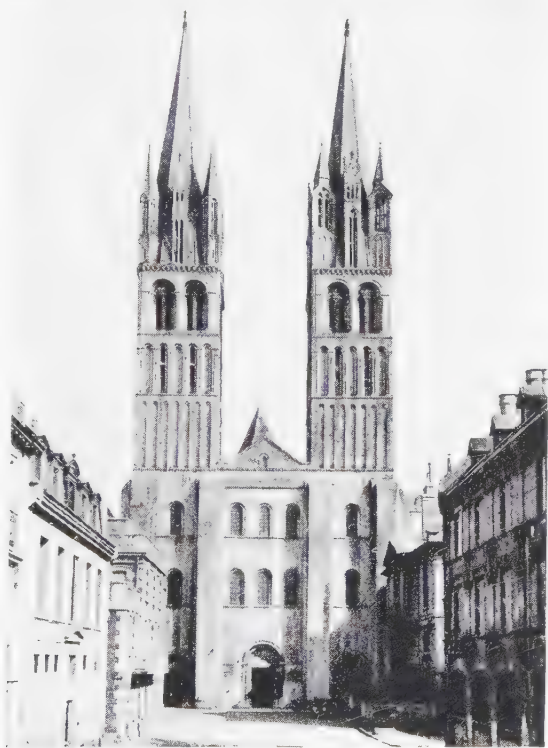
FIG. 53.
CAEN, SAINT
ETIENNE.
PLAN.

Hommes in plan and elevation. It too was originally covered with a wooden roof, and was rebuilt with sex-partite vaults about 1140. But when the problem of buttressing the vaults arose, the builders profited by their observation of the system in Saint-Etienne. They noticed that the part of the half-barrel vault *between* the piers was unnecessary as buttressing, for only at the piers did the triforium vault meet any of the thrusts exerted by the groined sex-partite vault of the nave. Therefore instead of building a continuous half-barrel vault over the triforium gallery, they constructed a series of half-arches which connected each nave pier with the corresponding external salient buttress. The covering of the gallery was managed by a wooden roof resting on the slanting tops of the arches as shown in the cross section

of the similarly constructed church at *Saint-Germer-de-Fly* (Fig. 55). The greater economy resulting from the elimination of a major part of the half-barrel vault is obvious. The importance of this detail of the construction of the Abbaye-aux-Dames is not limited to its economy, however, for it was the initial form of the flying buttress, a structural idea which was of tremendous importance as essential to the construction of the soaring vaults of the Gothic Cathedral.

The façade of the Abbaye-aux-Hommes (Fig. 53) represents one of the first successful attempts in medieval architecture to express the interior arrangement of a building in the exterior design. By achieving this aim, the effect of the building as a whole

acquires a unity which would otherwise be lacking. The four heavy vertical buttresses divide the façade into three parts corresponding to the nave and side aisles within. Similarly, the arrangement of the doors and windows of the façade expresses the three-part elevation of the interior. These basic elements of façade design are



(Photo Clarence Ward)

FIG. 53.—CAEN. SAINT ETIENNE. FAÇADE.

likewise found in the later Gothic period; the manner in which they are treated may vary but they are always present to some degree. The octagonal spires that crown the angle towers give a powerful vertical accent to the effect of the façade as a whole.

It was stated at the beginning of this chapter that the Romanesque style was that in which the constituent elements of classic,

oriental and barbarian influences first began to attain the integration essential to the monumental expression of ideas. It stands to reason that the nature of this integration would vary according to the proportion in which the three basic elements might be represented at a given time and place. In Italy, the classic spirit predominated. In the northern countries, particularly in France, the various elements were more evenly balanced. None the less, even in the most advanced examples of the Romanesque style, the classic and barbaric elements do not seem to have been brought into complete harmony. In the interior (Fig. 51), the heavy piers produce a slow and ponderous movement toward the altar somewhat similar to the effect of the nave arcades in the Latin basilica but charged with a deeper, more mystic significance. This is attained, however, at the cost of the unified effect of the earlier type for the vertical accents of the bays apparently conflict with the horizontal movement. The same is true of the exterior (Fig. 53). The nave and transepts of the basilica establish a horizontal accent whose effect is heightened by the side aisle and clearstory window arcades with their rhythmic progression (Fig. 32). In the Romanesque church, the predominant horizontals of the outline of the main part of the building conflict with the vertical accents of the western spires, the crossing towers and the small pinnacles of the transepts, and the salient buttresses of the walls. All these vertical accents apparently have a place in the design by virtue of a desire to suggest height which is not apparent at all in the low-lying horizontal forms of classic architecture. This search for verticality is an outstanding characteristic of the architectural expression of the Northern, barbarian temperament. In achieving the desired effect, the artist reveals the unconscious aspiration of his soul toward the spiritual realities suggested by infinite space. The Romanesque artist is unsuccessful in achieving it because he is endeavoring to express an abstract, super-sensuous idea by means of concrete and sensible forms. The vertical, height-seeking bays of the Romanesque nave are invariably turned back by the enclosing semi-circular arches of the vault which were forced upon the builder by his Roman heritage. The modifications of the Romanesque vaulting system which appear in Gothic architecture are direct results of an aspiration toward the vertical which had been thwarted in the Romanesque period by the limitations of the semi-circular arch and the square bay.

CHAPTER VIII

GOthic ARCHITECTURE

IN THE Gothic period, the various elements that entered into the civilization of medieval Europe became completely integrated. It was then that the confluent streams of classic, Oriental and barbarian thought mingled to form a new mode, logical in structure and comprehensive in scope. The man of the 13th century was entirely sure of his world, just as the man of fifth century Athens was sure of his. But between those two worlds, there was a difference that was of tremendous significance. For the Greek, the reality of things lay in their objectiveness; his experience of them was of the senses. The art by which he expressed this concept was one of form. The 13th century man was no less conscious of things than his Greek predecessor but he interpreted them in a different way. For him, the reality of things was not to be found in their objectiveness but rather in the degree to which they were related to a system which in turn formed part of some great, all-inclusive abstract principle. The Greek had also felt that there was an abstract ideal behind the appearance of things, but he thought that it existed in the thing itself. For the man of the 13th century, the principle lay outside of it.

The medieval point of view is expressed in an art of forms, but not as an end in themselves. Their real meaning is determined by their relationship to something else. In Gothic architecture, that something else is space. The problem of the Gothic architect was to integrate form and space, to make the former become real as it is related to the latter, to render the tangible significant only in terms of the intangible. Gothic architecture thus embodies the central theme of medieval thought which interpreted all things and evaluated all ideas by their relationship to the Church. The essential feature of Gothic design is a striving for effects of verticality with the consequent suggestion of height that has already been observed in the last examples of the Romanesque style. The most logical and impressive type in which this tendency appears is the Gothic architecture of France.

It has been pointed out that the Romanesque builder was unable to attain completely the verticality demanded by the northern temperament, by virtue of the round arches he employed in constructing the nave vaults of his churches. The round arches imposed still another restriction upon his designs, for if round arches are used in vaulting, it is preferable that the bays to be covered should be square, a fact discovered early in the Romanesque period in the relatively unsuccessful attempts to use them over oblong bays (Fig. 46). With square bays, the distance between the nave piers was as great as the width of the nave, or half as great at the very least if the alternate system were employed. This wide spacing tended to break up the length of

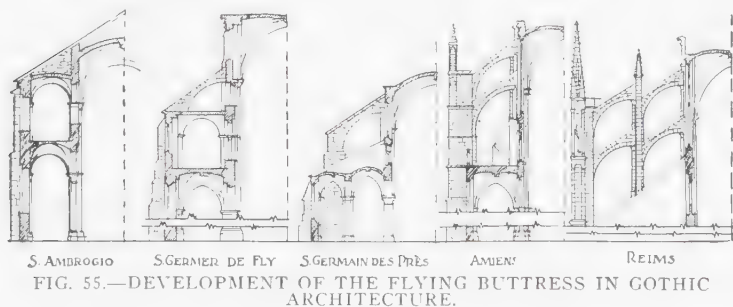


FIG. 54.—GROINED VAULTS WITH SEMICIRCULAR AND POINTED ARCHES.

the nave in separate units, the dominant impression being still of horizontal rather than vertical movement. To achieve and to unify the desired vertical effect, the Gothic builder made two important changes in the Romanesque system. By dividing the nave into a series of oblong bays instead of square ones, he eliminated the suggestion of horizontal movement created by the wide spaces between the piers of the Romanesque interior. Then to vault these oblong bays, he employed pointed instead of semi-circular arches (Fig. 54). The greater adaptability of the pointed arch to the vaulting of an oblong bay lies in the fact that within rather wide limits, it can be made to rise to any height above the springing, regardless of the space it spans, while the semi-circular arch cannot attain a height above the springing greater than its own radius. Thus where the Romanesque builder had to juggle with stilted arches springing from various heights in order to make the vault

crown level (Fig. 46), or weaken the diagonal arches by depressing them, the Gothic architect could attain that result very easily by varying the pitch of the supporting arches to make them all rise to the same height. The resulting difference in appearance between a Romanesque domical vault and a Gothic pointed one is seen in the illustration (Fig. 54). By making the vault crowns level, it was possible to raise the vault higher, for it was both lighter and easier to build.

The result of using oblong bays for the nave was a vertical instead of horizontal movement in the interior of the Gothic cathedral. The use of pointed instead of semi-circular arches resulted in an actual increase in the height of the vaults built with them. To realize the full possibilities of the latter, a new buttressing system had to be devised. In the Romanesque period, a close



structural relationship had to be maintained between the vaults of the triforium gallery and those of the nave in order to maintain the stability of the latter. This is the case even in the Abbaye-aux-Hommes and the Abbaye-aux-Dames at Caen where there are clearstories above the triforium. None the less, the germ of the new buttressing method lay in the construction of the latter church in the half-arches concealed under the triforium roofs, similar to those illustrated (Fig. 55) from the church of Saint-Germer-de-Fly. It remained only for these arches to be divorced from the triforium gallery and to be considered as mobile forces that could be raised with the nave vaults to any desired height.

The comparative diagrams (Fig. 55) illustrate the way in which this took place. At Saint-Germain-des-Près in Paris, the buttress is over the triforium roof but it is heavy and awkward in ap-

pearance. At Amiens, it has been doubled to insure the stability of both nave vault and clearstory wall and is somewhat lighter. The flying buttress needed rigidity rather than weight, the latter being supplied by the heavy vertical pier which the buttress itself connects with the clearstory wall. Thus by making it a slender bar, the builder at Amiens was able to retain all of its structural effectiveness and also to make it more decorative. The Amiens

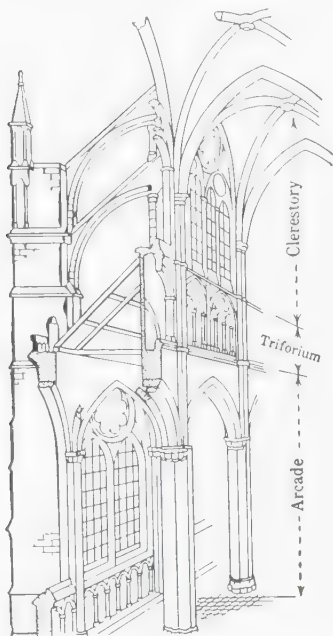


FIG. 56A.—AMIENS. CATHEDRAL.
SECTION OF THE NAVE.

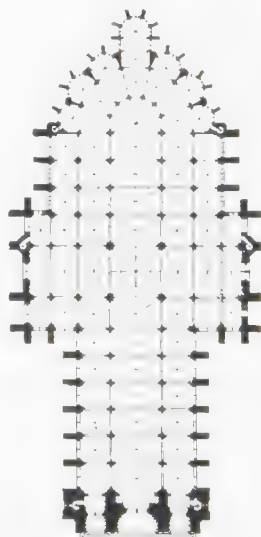


FIG. 56B.—AMIENS. CATHEDRAL.
PLAN.

system is even further refined at Reims, the buttresses being in two vertical ranges as well as two horizontal flights, and the forms are even lighter than at Amiens. The flying buttress is the only major structural innovation of the Gothic system. The pointed arch and the oblong vaults had both been used in the Romanesque period although never with any very extensive realization of their possibilities. As the only addition in the Gothic period to the structural repertory of the Romanesque builder, the importance of the flying buttress is considerable. Without it,

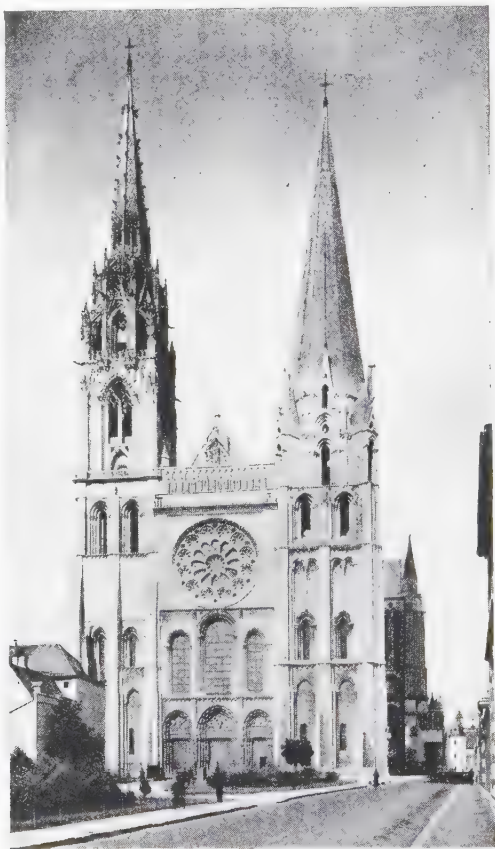
even the pointed arch could not have made possible the lofty, aspiring vaults of the French High Gothic cathedral.

As a result of using the pointed ribbed vault and the flying buttress, the Gothic style embodies an architectural idea that is basically different from that of any other style that has been considered. It has been pointed out before that one of the primary functions of architecture is to enclose space. In performing this function, the wall is very important for it not only encloses the space but supports the roof over it. In the Gothic system (Fig. 56A), the wall plays no part in supporting the vaults; that is done by the nave piers and the flying buttresses. The building is actually sustained by the skeleton of piers, vault ribs and buttresses, the wall being reduced to a mere screen between the interior and exterior. By thus eliminating the supporting function of the wall, better interior illumination is made possible for the entire space between the isolated supports may be taken up by a window. This was the actual practice in the High Gothic period and the brilliant patterns of color produced by the stained glass that filled the openings play a major part in establishing the effect of the interior.

The charm of the Romanesque style lies in the variety of ways in which the builder approached his basic problems. The beauty of the Gothic consists in the faultless logic of its solution of those problems. With the exception of the flying buttress, the Gothic builder had nothing to work with that had not been available to his Romanesque predecessor. He merely used the Romanesque elements with greater knowledge, a keener perception of what they meant and a clearer understanding of the values which he was attempting to symbolize in them. All of these qualities appear in their most monumental form in the Cathedral of Amiens.

The plan of *Amiens Cathedral* (Fig. 56B) is an elaboration of the Romanesque type (Fig. 40). The changes are most obvious in the eastern end of the building, the double-aisled choir, the ambulatory with many small chapels radiating from it, and the apse which is no longer covered with a half-dome but by a complex ribbed vault known as a chevet. The value of the pointed arch in vaulting is nowhere illustrated better than in the chevet and the irregular bays of the ambulatory. For the rest, the plan of Amiens is characteristic in showing the elimination of the wall as

a means of support and of enclosing space. Between the heavy black bars that represent the piers of the flying buttresses, there are only light lines indicating stained glass windows. It is almost



(Photo Clarence Ward)

FIG. 57.—CHARTRES. CATHEDRAL. FAÇADE.

as if sections of the wall had been turned at right angles to the space it was intended to enclose and made into the vertical piers of the flying buttresses.

In the façade (Fig. 58), effects characteristic of the High Gothic style are seen. It stands in a regular sequence of development

which can be traced from the Romanesque façade of the *Abbaye-aux-Hommes* (Fig. 53) through that of *Chartres Cathedral* (Fig. 57), the same elements of design appearing throughout. These



(Photo Clarence Ward)

FIG. 58.—AMIENS, CATHEDRAL, FAÇADE.

are the triple division of the façade, both horizontally and vertically, to indicate the nave and side aisles and the three-part elevation within. In general, the development that is apparent is in the direction of greater refinement and integration of detail, lead-

ing to a more pronounced vertical accent in the design as a whole. At Saint-Etienne, built by 1077, the solid wall masses still predominate over the voids of the openings. The portals and windows are small and do not play a very great part in the design. The façade of Chartres Cathedral (Fig. 57) is about seventy years later than that of Saint-Etienne and belongs to the period transitional between the Romanesque and Gothic. The elements of the Romanesque façade have been given a more definite verticality by emphasizing the angle towers and doubling the buttresses. There still remains something of Romanesque heaviness, but the portals and windows are larger. The rose window which appears in place of the upper row of three arched ones at Saint-Etienne was one of the favorite decorative motives of the Gothic style. The spires which complete the vertical accent in the façade are of different periods. The southern one is consistent in date with the rest of the façade while that to the north was erected in the early years of the 16th century.

The façade of Amiens (Fig. 58) shows the climax of the development. Begun in 1220, it has never been entirely completed, lacking the spires that were intended to crown the towers. In spite of their absence, this façade represents the complete integration of structure and decoration that was the goal of medieval architectural thought. The three-part division of the façade is prominent. Each part has its own portal which is no longer recessed in the wall as at Caen and Chartres but projects outward to form a deep porch, the sides of which are lined with life-size statues of figures in Biblical and church history. Two things stand out in the general effect of this façade. The first is the complete disappearance of the wall as a structural member, the supporting function being discharged by the great isolated piers, and the openings between them filled with a screen of ornamental stonework. The arrangement of these openings is similar to that of the windows of the Chartres façade; the rose window is the central accent with subordinate ones in the row of arched openings immediately above the porches. The second prominent effect in the façade is its verticality which is even more pronounced than in the other examples considered. Wherever a horizontal moulding or stringcourse is required to indicate the three-part elevation, it is never permitted to extend unbroken across the façade. Instead it is made to come out around the buttresses, the effect from the

normal point of view on the ground being a succession of horizontals rather than a single continuous one. The peaked gables of the porches also cut through the lower stringcourses, breaking their continuity.

The porches of the Amiens façade play an important part in the integration of interior and exterior that was sought in the design of the High Gothic cathedral. At the Abbaye-aux-Hommes, the portals are holes in the wall; their effect is to emphasize its function as a space-enclosing element. At Chartres, the portals are recessed as if the exterior space were pressing in on that of the interior, but the heaviness of the wall is still a very definite factor in the façade design. At Amiens, the projecting porches furnish a means of transition from the outside to the interior, whence it seems that there is no line of demarcation between them. In such ways as this are form and space related to each other in the design of the Gothic Cathedral.

The same effect results from other details of the façade. The pronounced verticality leads the eye upward; nothing is permitted to lessen this effect by which a movement from the tangible elements in the façade, such as the heavy piers at the base, toward the intangible space surrounding and penetrated by the towers is created. This effect can be observed in the south tower of Chartres Cathedral (Fig. 57). This was not the final goal of the Gothic style, however, for its ultimate effect is one in which the form of the building actually dissolves into the space around it. The means by which this was achieved is evident in the north tower at Chartres where the outlines of the spire are softened by the crockets, small curling leaves, that seem to grow out of it. By this same device, the crocket, all the separate forms of the façade, gables, pinnacles, stringcourses and capitals, appear to merge into the space around them (Fig. 58).

In the interior (Fig. 59), the dominant factor in determining the design is the same desire to create the effect of form dissolving into space that is evident in the exterior arrangement. The elements of the design are those inherited from the Romanesque style, nave arcade, triforium gallery and clearstory. But the horizontal movement of the Romanesque nave (Fig. 51) has been translated into a vertical one. The wide bays resulting from the use of semi-circular vaulting arches have been narrowed. The arcade is higher and its pointed arches give the first impulse to a vertical



(Photo Clarence Ward)

FIG. 27.—AMIENS. CATHEDRAL. INTERIOR.

movement which is carried on in the shafts of the piers. The eye is drawn upward by them into the gloom of the pointed vaults. Horizontal lines are subordinated throughout to vertical ones; the stringcourses come out around the pier shafts and die away completely in the crossing supports whose upright lines are unbroken by capital or moulding.

The final merging of form and space which is managed in the façade design by crockets and pervasive penetration is achieved in the interior through the color of the stained-glass clearstory windows. Without the glass, the light coming through the windows would be undiffused and harsh, making the structural details too prominent. This is the case at Amiens where the glass has been removed, with the result that the bones of the skeleton stand out too clearly. But in the color falling on them from the stained-glass, the structural forms seem to lose their concreteness, just as the otherwise insistent lines of the exterior spires and gables are diffused by the crockets. The final result is a completely abstract experience of color unrelated to form. The eye of the observer is drawn upward by the great piers which seem actually to become lighter the higher they go. Their strong outlines are lost in the irregular pattern of pure, radiant color pouring from the windows. Instead of being brought around by the vault as in the over-arching lines of a Romanesque interior, the eye is then lead still higher by the pointed arches, to be lost in luminous darkness. The passage from form into space has been achieved; the impression of solid weight given by the piers has been transformed into one of ethereal abstraction in the color pouring from the windows; the material has been converted into the immaterial. This is the aim of Gothic architecture.

The Gothic point of view was based upon one idea, the subordination of all things to the Church. By virtue of this fact, the 13th century was a period in which a truly communal spirit prevailed with the Church as a powerfully unifying force to give direction to all human activity and meaning to its accomplishments. One result of this is the almost total ignorance that prevails concerning the architects of the great cathedrals. Robert de Luzarches was one of the designers of Amiens, but nothing is known of him save that fact. As an individual he has no existence, for his magnificent achievement was not for his own glory but for that of the Church; to Robert it meant only greater grace for the salva-

tion of his soul. And just as the Individual was subservient to the Church, so all the arts were subservient to architecture. There is very little monumental sculpture from the medieval period save the figures in the great portals of the cathedrals; painting hardly existed except on the walls of churches, the pages of religious books and in stained-glass windows.

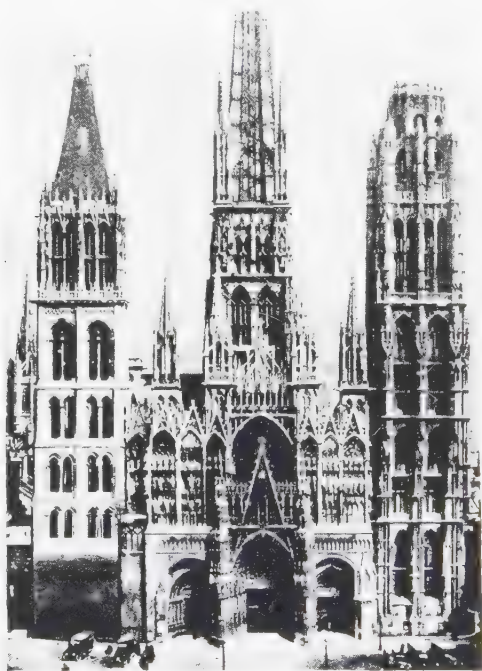


FIG. 60.—ROUEN. CATHEDRAL. FAÇADE.

Furthermore, it should be noted that architecture itself was not self-sufficient. Its forms had not been evolved as ends in themselves but as aids to an intuitive perception of the principle that gives them meaning which was analogous to the unquestioning religious faith required of the medieval man. In thus depending upon an abstract principle to give significance to form, certain basic architectural experiences are denied by the Gothic Cathedral. The wall no longer encloses space for it stands at right angles to it in the huge buttress piers. The stone vaults seem to have

no weight for apparently they float in the air. Nor do they have the quality of rounding over and enclosing the space they cover which is a fundamental purpose of the vault. More than this, the Cathedral as a whole cannot be comprehended at once as a unity. The flying buttress, for example, has no structural meaning in itself for the thrust of the interior vault must be supplied if it is to have any reason for existence. In other words, the unity of the cathedral is felt rather than understood and to feel it, the reality of sensuous experience must be denied. The observer knows that the spire cannot be fused with surrounding space and that the stone vaults are actually very heavy, however much the opposite may *seem* to be the case.

The direction taken by French architecture in its development after the 13th century shows a reaction against the abstractions of the High Gothic style. The façade of *Rouen Cathedral* (Fig. 60) was added to the 13th century nave in the first quarter of the 16th century, probably after 1509. The 13th century conception of the Gothic façade (Fig. 58), in which structure and ornament were one and the same, has disappeared. At Rouen, the decoration and construction are divorced. Each has its own identity, the screen of lacy stonework standing definitely in front of the wall which has recovered its function of space enclosure. The statues appear to have been set in place instead of growing out of the façade and the portal walls as they do at Amiens; they too have a claim to existence in their own right, not just as subordinate elements in an architectural scheme. All of this means that in the 16th century, the arts had freed themselves from the restrictions imposed upon them in the High Gothic period. Architecture is no longer forced to deny the reality of its proper effects for the sake of abstract, emotional sensation.

At the beginning of this chapter, it was stated that Gothic architecture appears in its most logical form in France. In other parts

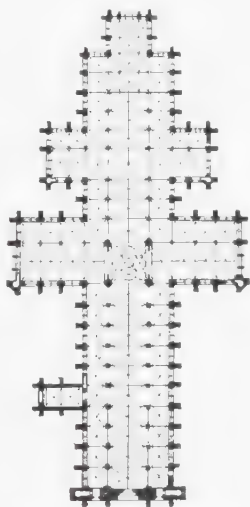


FIG. 61.—SALISBURY. CATHEDRAL. PLAN.

of Europe, similar decorative and constructive elements were employed during the 13th century but never with the same unity of effect. In England, for example, the Romanesque preference for broad, low proportions was never changed. *Salisbury Cathedral* (Figs. 61-63) furnishes an excellent comparison with Amiens in this respect for both were begun in the year 1220. The plan is much longer than that of Amiens (Fig. 56B) in proportion to



FIG. 62.—SALISBURY. CATHEDRAL. EXTERIOR.

its width. The doubled transepts and choir are other points of distinction from French models. Another difference between the plans can be seen in the varying treatments of the eastern end, that of the English structure being square while the French one is rounded. The proportions of the plan are reflected in the appearance of the exterior (Fig. 62). The main body of the church is long, low and picturesque in outline, in contrast to the vigorous masses and abrupt verticals of the French cathedral. The climax of the exterior is in the crossing tower which replaces the western spires of the French type. The logical decorative scheme of the French Gothic cathedral has no immediate counterpart in the Eng-

lish style. Instead, the buildings are usually set in broad lawns or closes which permit the effect as a whole to be grasped to an extent rarely if ever possible in France where the cathedrals are hemmed in by the structures built up around them.

Examples of the English Gothic style usually lack the structural integration which is such a notable characteristic of the French ones. The flying buttress as an effective structural and decorative feature appears only in a few buildings which were



FIG. 63.—SALISBURY, CATHEDRAL. INTERIOR.

designed either by French architects or under the influence of French methods. The unimportance of the flying buttress in English Gothic architecture is due in part to the preference for low and heavy walls as means of support that remained from the Romanesque period. In the interior (Fig. 63), the horizontal division of the elevation into nave arcade, triforium and clearstory is very prominent; the vertical unity achieved by the vaulting shafts of the French style is not even attempted. The decoration itself is not organic; the luxuriant naturalistic floral forms that appear on the stringcourses and capitals of the French Gothic cathedral (Fig. 59) have no counterpart here. In the interior of Salisbury,

there is a decorative contrast between the black marble shafts of the piers and the central columns which are of some other stone. The vault ribs are also utilized for decorative purposes in the English Gothic style. In Salisbury, the vaults are of the usual four-part groined style with structural ribs. But since the structure is much lower than such a building as Amiens, the plain surfaces of the vaults are rather unpleasantly prominent in the



FIG. 64.—GLOUCESTER. CATHEDRAL. INTERIOR OF THE CLOISTERS.

effect of the interior. To remedy this, the vault ribs in English Gothic buildings were often multiplied to form a very complex pattern on the surface of the vault, producing very striking effects (Fig. 64). These fan vaults in the cloister of Gloucester Cathedral reveal a technical proficiency that was unsurpassed in France and hardly equalled. They also demonstrate the lack of relationship between structure and ornament that is the chief difference between architecture of the High Gothic period in England and France.

In the 13th century, the fundamental realities of life were spirit-

ual rather than worldly. Architecturally, this resulted in a predominance of religious buildings in the medieval styles. It is not true, however, as is sometimes stated that the Middle Ages



FIG. 65.—CAHORS. PONT VALENTRE.

built only churches. In structures of a secular type, the Gothic architect was capable of producing effects altogether comparable to those of the great cathedrals. Such is the case in the *Pont Valentré* (Fig. 65), a fortified bridge at Cahors in southern France. Here there was no necessity to subordinate architectural

effects to spiritual ends and as a result, the impressiveness of the bridge arises from the forthright statement of function which is intrinsic in its appearance, and its fine proportions. An interesting play of light and shade is created by the diagonal planes of the heavy pier buttresses which are arranged to deflect objects in the



FIG. 66.—FLORENCE. PALAZZO VECCHIO.

water from direct contact with the bridge. The massive towers furnish accents in the line of the bridge top which rises slightly in the middle to form an "ass back." A structure like this is as eloquent of the power of medieval thought as a cathedral. In each, the design is perfectly adapted to the purpose of the structure whether it be a purely utilitarian one in the bridge or the symbol of Man's unconscious aspiration toward spiritual realities in the Cathedral.

Another example of medieval secular design, this time in Italy,

is the *Palazzo Vecchio* of Florence (Fig. 66), which was, and is yet, the town hall of the city. Its construction at a comparatively early date (1298) reveals the extent to which Italy had advanced over the northern countries in the development of civic spirit, for very few buildings of this type in the north attain such monumentality before the middle of the 14th and the 15th centuries. It represents an enlargement of the type of building erected by the wealthy Florentine citizens as private residences and is more of a fortress than anything else. The necessity for this is easily understood in view of the internal wars that periodically convulsed the city. The impressive effect of the Palazzo Vecchio is attained through its powerful and massive walls of roughly-cut stone with the outside faces left unsmoothed. The solidity of the lower part of the building with its small openings is thrown into sharp contrast with the graceful and slender bell-tower.

There remains but one more general consideration in regard to the Gothic style. Perhaps more than any other, it brings home to an Occidental observer the consciousness that great architecture has a spiritually enriching effect. When standing in the nave of Amiens Cathedral, it is impossible not to believe in the reality of religious experience. This impression transcends all that may be objectively known about the building. Whether Christian or unbeliever, the observer cannot help but experience a powerful emotion from the patterns of color and form and the sense of illimitable space. To have that experience is to realize in some measure the reality of religious belief, so completely does the Cathedral set forth in its forms and their organization the ideas which were the most important and significant for the men who built it. The nature of those ideas has never been more clearly expounded than in the words of Suger, abbot of the great monastery at Saint-Denis, near Paris, and one of the outstanding personalities in medieval history: "When the house of God, many colored as the radiance of precious jewels, called me from the cares of this world, then holy meditation led my mind to thoughts of piety, exalting my soul from the material to the immaterial, and I seemed to find myself, as it were, in some strange part of the universe which was neither wholly of the baseness of the earth, nor wholly of the serenity of heaven, but by the grace of God I seemed lifted in a mystic manner from this lower toward that upper sphere."

CHAPTER IX

ARCHITECTURE OF THE RENAISSANCE IN ITALY

THE term "Renaissance" or "re-birth" which is applied to the period immediately following the Middle Ages implies that there must have been a very great difference between those two eras. This difference lay in the re-appearance in the Renaissance of the classic point of view as a vital factor in the thought of Mankind. This re-appearance has been attributed to various causes. It is sometimes stated that it was the result of finding many examples of antique art, long-buried statues and treasures of Greek and Roman literature that had been forgotten in monastery libraries. The sudden revelation of the beauty of past ages is supposed to have inspired medieval man to emulate it; in attempting to re-vitalize the forms which gave expression to Greek and Roman thought, the recreation of western European civilization was begun. Actually this was not the case.

The Renaissance came about as a result of a modification of European thought which had been in the process of evolution for some time before it finally resulted in an open break with the medieval point of view. According to the latter, Man had no importance save as he was a part of the Church. The Middle Ages was a time occupied almost exclusively with spiritual values; the physical world was considered only a proving ground for the soul in which it was prepared for the realities that were to be found only in the next. In the Renaissance, the intrinsic dignity of Humanity was felt once more, just as it had been in classic antiquity. More than this, the world in which Man lived was also held to be worthy of interest in its manifold aspects. This interest in Nature during the Renaissance has an apparent parallel in the Middle Ages which viewed Nature very realistically but only as a manifestation of divine purpose. There was no such thing as Science in the modern sense during the Middle Ages, for the scientific point of view is born of a searching inquisitiveness about

things which are believed to have meaning in and of themselves, not just as symbols in some previously determined abstract order. Such inquisitiveness existed in the Renaissance and for this reason Science as such dates from that period. Then for the first time is found the analytical interest in Nature which gave birth to the modern point of view. As the most important single element in Nature, Man thus became once more the focal point of human interest, not as a mere cog in a theological machine but as an end in himself.

The Renaissance point of view could hardly have developed had not the principles maintained by the Church been considerably changed since the time when it was at the height of its power. Politically, this had been reached in 1077 when Henry IV yielded to Pope Gregory VII in the deep snows of Canossa. Spiritually, the Church had reigned supreme over human destiny during the 12th and 13th centuries. But the atmosphere was too rarefied in the world of the spirit in which it forced men to live. The value of the Individual was never acknowledged for he was only a small and insignificant unit in an intellectually perfect order. The unconscious revolt against this point of view that began to take form even before the end of the Middle Ages had its effect upon late Gothic architecture. As will be seen, it also is evident in the more worldly painting and sculpture of the 14th and 15th centuries in France. It is the animating spirit of the poems by François Villon, and in a more genial form, infuses the doctrines of St. Francis of Assisi with a kindly spirit very different from the austere principles voiced by Bernard of Clairvaux.

Once this change in viewpoint is understood, it is not surprising that the art of the Renaissance should be so different from that which preceded it. Nor is it surprising that its forms should reveal an affinity with those of classic art. The essentially symbolic character of medieval art made it a poor vehicle at best for the expression of the humanistic ideas of the Renaissance. On the other hand, the whole of classic thought centered around a deep interest in Man, an interest which is reflected in classic art. Thus instead of saying that the discovery of examples of classic art was responsible for the Renaissance, it would be more nearly correct to say that the Renaissance was responsible for the re-discovery of the principles of classic art. This is borne out by the fact that during the Middle Ages, there had been a fairly exten-

sive knowledge of the art of classic antiquity, particularly in Italy, which did not stimulate a Renaissance. Mere knowledge of the forms was not enough, for an attitude of mind sympathetic to them and capable of understanding them was required. This also provides an explanation for the earlier appearance of the Renaissance in Italy than in other parts of Europe. The classic habit of thought was always strong there, even during the Middle Ages. Italian Romanesque and Gothic buildings contain many reminiscences of antique forms, appearing as classic skeletons clothed by a layer of medieval details. For Italy, the Renaissance was simply a reversion to the classic point of view which was her rightful heritage.

It should not be assumed, however, that Renaissance architecture was created merely by copying Roman buildings. The process was rather that of taking the classic structural and decorative vocabularies and using them in a different way. With his medieval structural technique, the Renaissance architect could not reproduce the forms of Roman architecture as the literary humanists of the time, with the greater resources of verbal expression, were copying those of Roman literature. These observations refer only to Roman models for they were the only examples of classic art known to the period. Three-and-a-half centuries were to pass before Greek art became well enough known to western Europe to have any appreciable effect upon its creative efforts.

One more general consideration of Renaissance architecture remains before turning to the monuments themselves. This is its demonstration of a significant contrast between the Renaissance and the Middle Ages with regard to their opposed conceptions of the value of the Individual. During the Renaissance, the Individual emerges from the impersonal social order in which he had been engulfed and claims the right to express his own ideas in his own way, thus embodying for the first time the point of view of the modern, self-conscious artist. Up to that time, the arts had been the expression of communal rather than individual values, even in the classic world. This does not minimize the importance of such men as Iktinos who built the Parthenon, Anthemius of Tralles and Isidorus of Miletus, the designers of Hagia Sophia, or Robert de Luzarches who was the architect of Amiens Cathedral. It emphasizes the fact that they are bright spots in the anonymous gloom that obscures the names of their equally

brilliant contemporaries. All this is changed in the Renaissance. The architect no longer builds for the greater glory of Italy or of the city in which he lives. He does not build for the greater glory of God. He builds to win honor for himself during life and to insure the preservation of his name in the minds of men after his death.

A. THE EARLY RENAISSANCE

Typical of such individualism was the career of Filippo Brunellesco (1377-1446), a Florentine who may rightly be called the first Renaissance architect. He had been trained as a goldsmith but his interest was turned to architecture when he was unsuccessful in the competition held in 1400 for the prize of executing a pair of bronze doors for the Baptistery in Florence. Chagrined at his failure, he determined to seek success as an architect. He went to Rome in 1403, taking with him a youth called Donatello who was destined to achieve great distinction as a sculptor during the early Renaissance. In Rome, the two friends spent a number of years examining in detail the monuments of classic art which they found.

In 1417, Brunellesco returned to Florence where he set about obtaining the commission to erect a dome over the crossing of the *Cathedral* (Fig. 67). This huge building had been begun in 1296 in the Tuscan Gothic style whose chief characteristic was a lavish use of colored marble for decoration in a way not unlike that seen in Roman architecture. The designer was Arnolfo di Cambio who died only a few years after undertaking the construction of the building. Giotto, the painter, was appointed to his place in 1336, but his contribution was limited to the beautiful campanile at the western end. Work on the building continued during the 14th century, but when Brunellesco came back to Florence from Rome, the dome over the crossing was still lacking, although the structure was complete up to the level of its springing. It presented a difficult problem; the base was one hundred and eighty feet from the ground and about one hundred and forty feet in diameter. It was octagonal in shape and over this space, the dome was to be erected without using any centering. This latter point was essential as a means of avoiding expense. Brunellesco promised to meet all these requirements but an obstacle appeared in the demands of the committee in charge of work on

the building that he submit his plans to them for approval. This Brunellesco refused to do, saying that if he did so, the committee would get the credit for accomplishing the task which he felt should be his. Thus is typified the conflict between the old and the new, the impersonal medieval order against the rights of the individual. Brunellesco was victorious and his name has been associated with the dome ever since.



FIG. 67.—FLORENCE. THE CATHEDRAL. EXTERIOR FROM THE NORTHWEST.

The dome represents a combination of classic and medieval structural principles with the latter predominant. It is a skeleton of ribs; eight massive ones are at the angles with two smaller ones in each of the spaces between them, making twenty-four in all. It is pointed in section to lighten the lateral thrusts which are offset by belts of stone and wooden beams bolted together around the bottom of the dome itself. These belts are buried in the masonry, but are no less essential to the stability of the structure for being invisible. The spaces between the ribs are filled with

blocks of stone supported by the ribs themselves. It is thus not a dome in the classic or Byzantine sense but an eight-sided vault whose thrusts are offset in the manner usual in Italian Gothic construction, by tying the ends of the arches together. Classic elements are not very prominent in the design, although it is known that Brunellesco spent much of the time he was in Rome studying Roman methods of dome construction, notably in the Pantheon. The exact way that Brunellesco avoided the use of centering is not known, even though contemporary accounts indicate that he did so. The dome was completed in 1436 with the exception of the lantern tower at the apex which was finished in 1461, fifteen years after Brunellesco's death.

The dome of the Cathedral of Florence differs from that of the Pantheon in a number of respects. The chief one is in the relative importance of the exterior effect. The older domes are more impressive in the interior than from the outside. In Brunellesco's design, the dome is the dominant feature of the exterior, its bulk being admirably set off by the lines of Giotto's slender campanile. To attain this dominance, the dome had to be made very high and some modification of its interior design was necessary as it would otherwise have been too lofty for the most effective relationship with the inner space of the building. In order to obtain a design that would be equally effective from both inside and out, the dome was built in two shells, the eight angle ribs being common to both.

In the Pantheon and Hagia Sophia, the domes are deprived of external impressiveness by being crowded down into the buttresses essential to their stability. Brunellesco attained external impressiveness in his design by incorporating the buttressing in the dome itself, the thrusts being offset by the girdles of stone and wood buried in the masonry. The beauty of form that resulted was obtained at the expense of a complete statement of structural fact. This is a very different principle of architectural design than that which determined the forms of Greek and Gothic architecture. In both of those styles, beauty of form was attained by means of the construction and their essential character can be grasped only after the structural principles involved are understood. In Renaissance architecture, problems of construction play little or no part in determining the form of the building. The dome of the Cathedral of Florence is really a vault, but the but-

trekking essential to its stability contributed nothing to its form, concealed as it is in the masonry. In this respect, it is typical of all Renaissance architecture in which a preconceived ideal of beauty is the most important factor in determining the forms employed rather than structural necessity.

The truth of this generalization is made more evident by an examination of the *Pazzi Chapel*, a small oratory which Brunel-

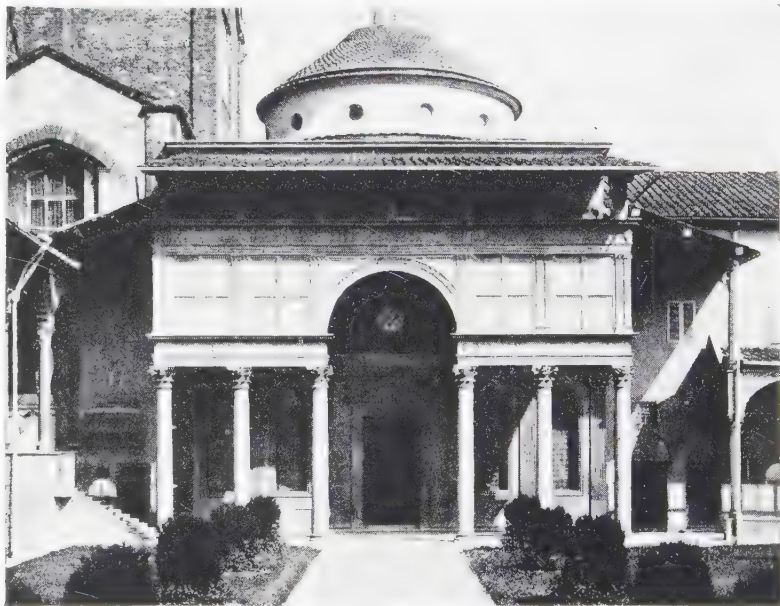


FIG. 68.—FLORENCE. PAZZI CHAPEL. FAÇADE.

lesco built for the Florentine family of that name in the Gothic cloister of Santa Croce (Figs. 68, 69). Begun about 1420 and completed by 1429, it is probably the first ecclesiastic building erected in the Renaissance style. It is a small rectangle in plan, covered by a dome on pendentives which is flanked by barrel vaults. The façade (Fig. 68) is in two levels; below is a porch or loggia covered by a dome in the center which is flanked by barrel vaults extending to the outer ends of the porch; above is a wall decorated with pilasters and panelling which masks the dome. It is obvious that the construction is not medieval. The dome on

pendentives is Byzantine in origin and the relationship of arch and column in the loggia is specifically Roman (Fig. 29), as is the entire treatment of the order. Further classic reminiscences appear in the triangular pediment of the doorway and the coffered ornament of the barrel vaults.

In the interior (Fig. 69), classic suggestions are equally strong. The central dome rests on pendentives and is buttressed by shal-

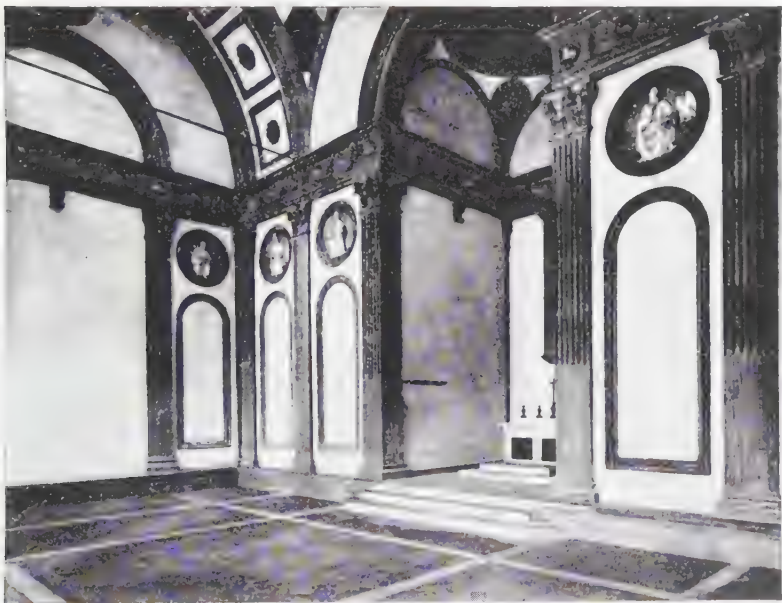


FIG. 69.—FLORENCE. PAZZI CHAPEL. INTERIOR.

low barrel vaults. The arches spring from an entablature, very similar to the one of the loggia, which surrounds the entire interior. It is supported by Corinthian pilasters of the Roman type, and Roman also is the ornament of the vaults which consists of rosettes and coffers. It is easy to see that the order is entirely decorative in function and has no relationship to the structure of the building. As decoration, the pilasters and entablature are very effective. They are of green stone which forms an agreeable contrast with the cream-colored stucco of the walls. Further decorative accents appear in the round-headed panelling and the

medallions, forming a very pleasing ensemble. The decorative scheme of the exterior is not so well unified as that of the interior. The pilastered wall that masks the barrel vaults of the loggia is too heavy for the slender columns beneath, in fact as well as appearance, for some of the latter have split under the weight resting on them. Furthermore, their equal spacing over the entire length of the façade makes it impossible to frame the composition, an effect which would require a suggestion of more support at the angles than at other points in the colonnade. The problem of the angle column, whether in loggias of this type or in courtyards surrounded by arcades, is one that challenged the skill of many Renaissance architects.

The Pazzi Chapel represents a departure from medieval architectural tradition in a number of ways. The most obvious is the use of classic decorative forms which have little or no relationship to the construction of the building. Lack of relationship between form and structure results in lack of the organic unity that is such a notable characteristic of medieval buildings. The impression of over-heaviness in the attic story of the façade is one instance of this. Throughout the entire structure, the various forms seem to have been employed because they were pleasing and attractive in themselves, not because they were essential to the construction or even because they formed an effective relationship with other forms. Brunellesco apparently took an almost naïve delight in parading his knowledge of classic art in the design of the Pazzi Chapel, and it is the freshness and variety with which he employed its forms that gives the structure its undeniable charm.

Although the Renaissance in architecture is first apparent in religious structures, the worldly trend of thought in the period under discussion soon created a demand for a monumental style in secular edifices as well. Early in the 15th century, a palace type was evolved in Florence to meet the needs of the wealthy burghers who were becoming the most powerful class in the city. One of the first examples was the *Medici-Riccardi Palace* (Figs. 70, 71), erected about 1430. The architect was Michelozzo Michelozzi (ca. 1396-1472) who was a pupil of Brunellesco, and his patron was Cosimo de' Medici, the foremost citizen of Florence at that time. Michelozzo's design established a pattern⁸ for the Florentine Renaissance palace which was still followed in buildings as

late as the 16th century, even though it retained many of the old Gothic forms as comparison with the medieval Palazzo Vecchio (Fig. 66) will show. It is a hollow rectangle in plan, built around a central courtyard, in much the same fashion as the later Farnese Palace in Rome (Fig. 75), with the façade rising directly from the street.

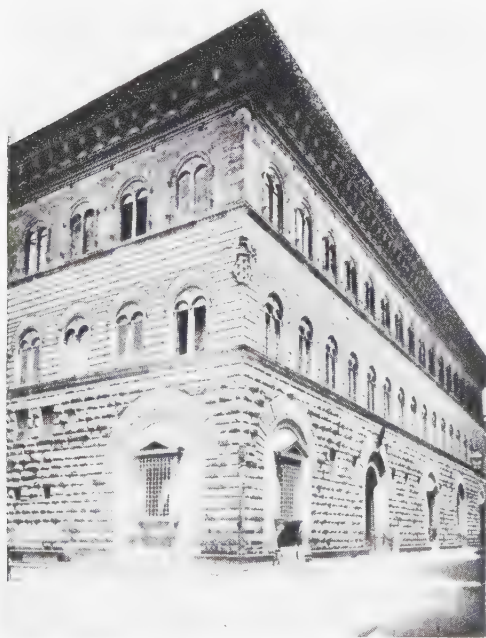


FIG. 70.—FLORENCE. THE MEDICI-RICCARDI PALACE.

The exterior of the Medici-Riccardi Palace (Fig. 70) appears to be that of a fortress rather than a residence; this effect arises from the massive rusticated walls and the small openings of the ground story which speak eloquently of the necessity for protection from outside disturbances. The windows are divided by a central mullion in the Gothic manner and are simple openings in the walls; the brackets and pediments of those in the lowest story were added some time later. Renaissance features based on Roman models include the great cornice which Michelozzo used instead

of the battlements which usually crowned the medieval palace. The cornice of the Medici-Riccardi Palace was rightly appreciated by later architects for its success in this capacity. The mouldings and modillions were formed according to Roman prototypes, and its size was determined in proportion to the entire height of the building. Also from Roman models came the method of handling the stringcourses that separate the stories and give the



FIG. 71.—FLORENCE. THE MEDICI-RICCARDI PALACE. COURT.

entire design the horizontal accent so carefully avoided by the Gothic builder. The idea of rusticating the walls Michelozzo undoubtedly derived from the Palazzo Vecchio (Fig. 66), but he modified it in application. The rough stones of the ground story give way to smooth ones with bevelled joints in the second, while the third story is quite plain. The contrasted surfaces of the façade are an integral factor in its well-ordered, balanced effect, and the variety they give avoids the monotony that would result if the treatment of all three stories were the same.

The courtyard (Fig. 71) reveals in many details the results

of Michelozzo's study of classic architecture. The capitals are a modified form of the Roman Composite type with its combination of Ionic scrolls and Corinthian acanthus leaves. The arches spring directly from the capitals as in late Roman buildings (Fig. 29) and their mouldings are repeated in the framing entablature above them. As in the Pazzi Chapel, the arcades seem too light for the walls they support. The groined vaults of the galleries spring directly from the capitals, their lateral thrusts being offset by iron tie-rods. The problem of the angles is approached in the same fashion as in Brunellesco's Pazzi Chapel loggia (Fig. 68). The bays are of the same width throughout and the angle column no heavier than the others whence it seems too slender for the weight resting on it.

The Medici-Riccardi Palace is an important building in the history of architecture. It represents the first stage in the transition from medieval fortress to modern city residence. It established the type of the Florentine Renaissance palace as has been mentioned and powerfully affected the style of similar buildings elsewhere. Its historical interest is also great in addition to its architectural significance. As the home of the Medici family, many incidents occurred within its walls that vitally affected not only the course of Florentine history but that of the entire western world. The artistic treasures it once housed formed the nucleus of the most extensive collections of Renaissance art in the world, and as a museum today, its greatest treasure is the magnificent Procession of the Magi painted on the walls of its chapel by Benozzo Gozzoli (Fig. 272).

The *Rucellai Palace* in Florence (Fig. 72) is another example of Renaissance secular design and is of the general type established by Michelozzo in the Medici-Riccardi Palace. It was finished in 1455, after the designs of Leon Battista Alberti (1404-72). It is less massive and more ornate in appearance than the older building (Fig. 70). The latter effect is due to the superimposed orders of classic pilasters that decorate the three stories of the elevation, a direct reversion to Roman methods of ornament (Fig. 20) and the first example in Renaissance architecture of a motive which became very popular as the style developed. The second point of distinction from the Medici-Riccardi Palace, the impression of greater lightness, is the result of the small cornice which is proportioned to the upper story only and not to the entire façade.

The ornamental pilasters support entablatures which separate the stories instead of the stringcourses employed for that purpose by Michelozzo. This idea was also based on Roman usage and gave Alberti an opportunity to introduce a band of delicate relief carving as a frieze. The design of the façade as a whole reveals a fine balance between solids and voids. The variety attained

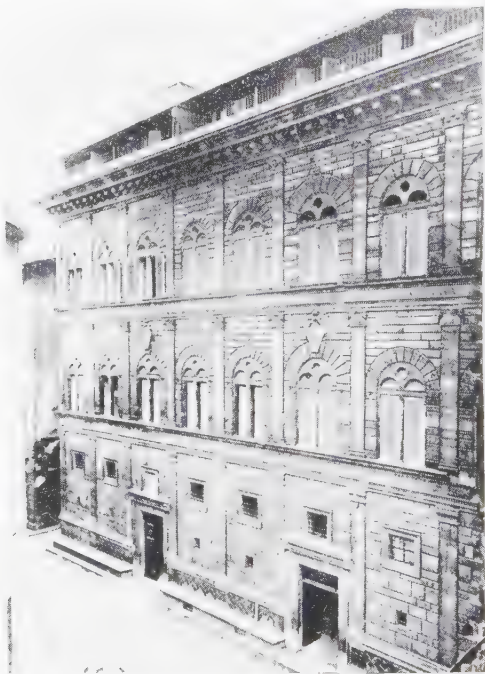


FIG. 72.—FLORENCE. THE RUCELLAI PALACE.

by rustication in the Medici-Riccardi Palace is here effected by the pilasters which are not spaced evenly but with slight variations in the width of the bays, those which frame the doors being somewhat farther apart than the others, thus avoiding a monotonously even rhythm. The windows are still of the medieval type, an opening flush with the wall and divided by a mullion.

The Rucellai Palace demonstrates the tendency of Renaissance design in the latter part of the 15th century toward a use of classic

elements that was more nearly in accordance with antique practice than had been the case in the work of Brunellesco and Michelozzo. In contrast with those men who were still quite medieval in being primarily practical builders, Alberti was a scholar. His commentary on the writings of the Roman architect Vitruvius had brought him into close contact with the theories of that author by which his own designs were noticeably colored. His work stands



FIG. 73.—RIMINI, SAN FRANCESCO. EXTERIOR.

as typical of Renaissance art in general which is distinguished from that of the Middle Ages by embodying a conscious ideal of beauty determined by the taste of the period rather than an unconscious one attained intuitively as in the Gothic Cathedral.

This attitude of the Renaissance is clearly revealed in Alberti's remodelling of the 13th century church of *San Francesco* at Rimini (Fig. 73) which took place between 1446 and 1455. It was undertaken at the request of Sigismondo Malatesta, the Tyrant of Rimini, to serve as a shrine for his mistress. Over the brick core of the earlier structure, Alberti spread a marble veneer in the form

of a Roman arch of triumph, the central opening serving as the entrance portal, flanked by blind arches on each side. The design, which lacks the upper story originally planned, was based on that of a Roman arch in Rimini. In the full entablature which is broken out over the semi-detached columns, there is something of the ostentation that characterized the later Roman buildings, an impression which is intensified by the richly moulded, pedimented doorway. The carving of the decorative garlands and friezes is typical of the Early Renaissance, however, and its lightness and delicacy does much to relieve the dryness of the design as a whole.

The development of art in the Early Renaissance art centered in Florence. Several things were responsible for this, but probably the most important one was the democratic spirit that prevailed in the city which gave to artists the most ample opportunities for the expression of their ideas. This was not true of all parts of Italy. The theoretically republican government of Venice, for example, was actually an oligarchy. The restraining atmosphere under such conditions is reflected in Venetian architecture of the early 15th century which adhered to medieval forms long after the innovations introduced in Florentine architecture by Brunellesco and Michelozzo had yielded to others dictated by changing tastes. Moreover, Venice did not possess the direct classical heritage of which the Florentines were so proud, which accounts even further for the late appearance of Renaissance motives in Venetian building. The *Vendramin Palace* on the Grand Canal (Fig. 74) was designed by Pietro Lombardo (1435-1515) and was begun in 1481. The windows are divided by tracery in the Gothic manner although the façade as a whole is made up of superimposed orders of engaged columns on pedestals. They are so arranged as to divide the front of the building in three parts, the central bay being separated from the side ones by a wall with two engaged columns. This triple division of the façade is a characteristic of Venetian palace design that is present in the earliest known examples and is found as late as the 18th century. The Venetian palace type differs from the Florentine in its greater openness. The windows are large and ample instead of being small openings in a massive wall. Their arrangement indicates that the rooms of the building extend across its width rather than being grouped around a central court. This latter arrangement also

existed in Venetian palaces, but the court was not as important in them as in the Florentine buildings where it served as a place for carriages and horses to stand for which no provision was made on the exterior. The openness of the Venetian façades could only be found where it was not necessary to protect the house against intruders. It is tacit evidence of the domestic peace of Venice as compared with the turbulent life in Florence.

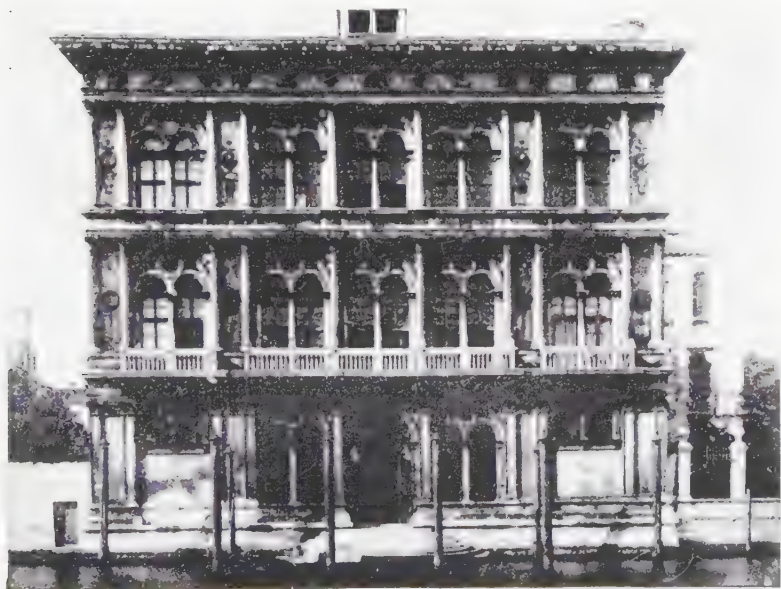


FIG. 74.—VENICE. THE VENDRAMIN PALACE.

The Renaissance in Italy is generally divided into two periods, the Early Renaissance and the High Renaissance. The Early Renaissance dates from 1420, the year in which the Pazzi Chapel was begun, until about 1500, although this latter date varies in different sections of the country. The development that occurs in this early period of the Renaissance begins with an admiration for classic forms which is none the less powerful for being uncritical in the academic sense. The structural tradition of the Middle Ages was still strong, particularly in buildings such as churches in regard to which a conservative attitude would naturally be

expected. The medieval reminiscences in the Cathedral of Florence and the Medici-Riccardi Palace have been noted, but it should be observed that they appear coupled with classic details which are treated in a highly individual fashion. It is only in the last part of the 15th century that the academic approach to classicism becomes evident in the work of the theorist Alberti and his successors, notably Donato Bramante. The buildings by these men reveal a much closer adherence to the canons of classic design laid down by Vitruvius than is apparent earlier in the century. Where the proportions and details of the earlier works were determined largely by the instinctive feeling of their designers, in later ones they were controlled almost entirely by laws of design based on the Vitruvian precepts. In many cases, the results are saved from dryness only by the wealth of magnificent carving, the lightness and delicacy of which are expressive in every detail of the gay and carefree spirit of the Early Renaissance that finds its literary expression in the licentious strophes of Lorenzo de' Medici's Canzoni.

B. THE HIGH RENAISSANCE

The second phase of the Italian Renaissance fell in the first half of the 16th century. During that time, artistic activity centered in Rome which replaced Florence as the foremost city in Italy in that respect. Two causes contributed to this effect. The first was the banishment of Piero de' Medici from Florence in 1494 which terminated abruptly the control which his family had exercised over that city since the early years of the 15th century. This in turn put an end to the artistic patronage which had filled the Medici palaces with the paintings and statues of the Florentine artists, who were forced to go elsewhere to find purchasers for their works. The most logical place to find them was in Rome which was rapidly acquiring importance among the Italian cities by virtue of the greatly increasing power of the Papacy. This was the second factor in producing the shift of artistic activity from Florence to Rome. During the whole of the 15th century, the Church had been attempting to regain the prestige it had lost as a result of the "Babylonian Captivity" at Avignon which ended in 1377. To achieve this end, it subscribed to the worldly ideals of the time, and the humanist popes Nicholas V and Alexander VI encouraged artists just as did the secular rulers of the Italian city

states. Under them, Rome gradually ascended from the state of a provincial town to which it had sunk to one more appropriate for the capital of Christendom. Thus when Julius II ascended the Papal Throne in 1503, the way had been paved for the tremendous interest in art that characterized his incumbency. The impetus to all forms of artistic creation that was given by his patronage did not subside until many years after his death. It was a powerful factor in the production, between 1506 and 1540, of the culminating works of the High Renaissance in Italy.

In general, the buildings of the 16th century appear more massive and stately than those of the 15th (Cf. Figs. 71, 77). In part, the change is due to the unconscious expression of the aristocratic spirit of Rome which stood in such sharp contrast to the democracy of Florence. It was also partly the result of increased knowledge of the architecture of ancient Rome. But especially was it the consequence of a search for greater significance than had been attained in the art of the earlier period. To Brunellesco and Michelozzo, and even in some measure to Alberti, the vision of classic beauty was a source of spontaneous delight, something of which they attempted to infuse in their own designs. The followers of these men in the High Renaissance sought for more than this. In the impressive Roman ruins which they beheld on all sides, they observed a dignity and strength very different from the gracefulness of the sometimes unstable designs of the 15th century, and possessed in consequence of a character which they failed to find in the superficial classicism of their immediate predecessors. In an effort to give their own designs something of this character, they based them more directly on antique prototypes, being guided in their practice by the writings of Vitruvius. It may appear in consequence of this that the difference between Early and High Renaissance architecture is due to increased knowledge of that of antiquity. To a certain extent this is true, but more important than that was the desire for greater dignity and impressiveness which was the stimulus to a more exact use of classic forms. It was this which turned the eyes of the 16th century more closely to the art of Rome.

The High Renaissance style was not developed without taking cognizance of what had gone before, however. The *Farnese Palace* in Rome (Figs. 75-77) still retains some 15th century characteristics. It was built for Cardinal Alessandro Farnese who later

became Pope Paul III. Begun in 1517 by Antonio da Sangallo the Younger (1485-1546), who designed the first and second stories, it was terminated after his death by Michelangelo (1475-1564) who added the third story and the cornice. The plan (Fig. 75) reproduces the Florentine arrangement of rooms grouped

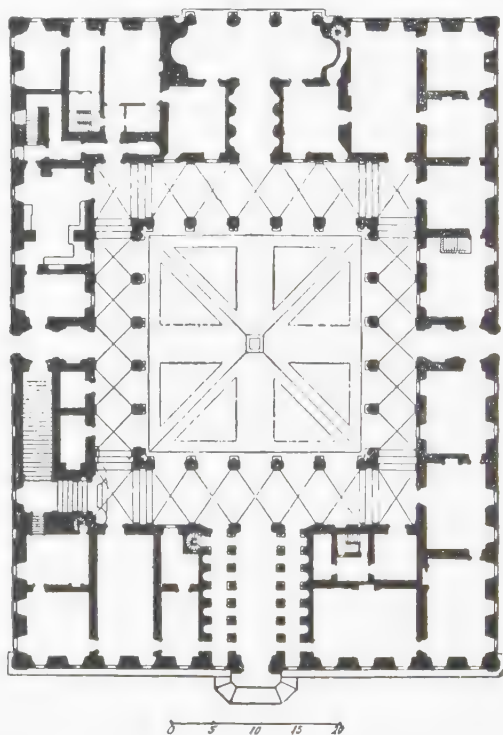


FIG. 75.—ROME. THE FARNESE PALACE. PLAN.

around an open courtyard. The façade (Fig. 76) is also reminiscent of the early Florentine palaces in its avoidance of the order as used by Alberti and Bramante. The carrying on of the Florentine tradition in the Farnese Palace was only natural as both Sangallo and Michelangelo were citizens of Florence, the latter having been commissioned at one time to insert the ground story windows of the Medici-Riccardi Palace in Michelozzo's de-

sign (Fig. 69). The interest he felt in the building as a result of this contact with it was probably the reason he designed a cornice for the Farnese Palace as vigorous in its bold projection as that of the Florentine structure which it resembles in proportion and general arrangement though not in detail.

Other details of the façade reveal the taste of the High Renaissance. The walls are plain without the Florentine rustication. To

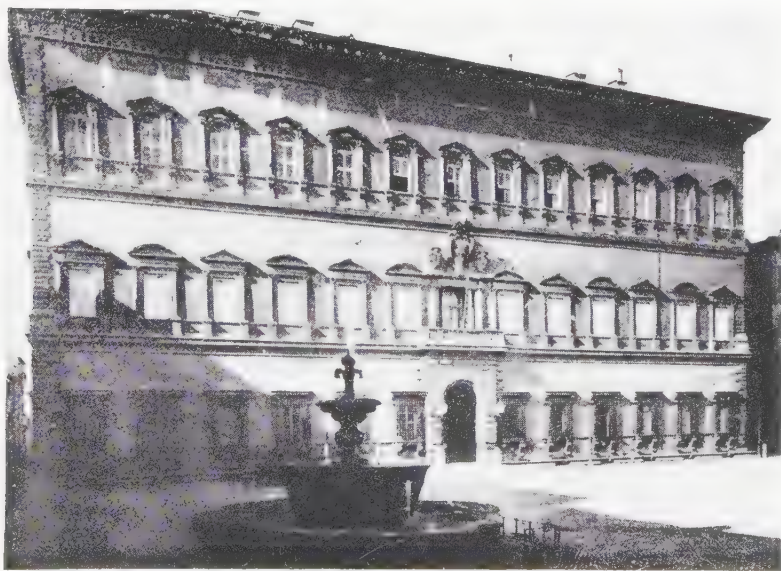


FIG. 76.—ROME. THE FARNESE PALACE.

give them variety and interest, the window frames project instead of being flush with the wall as in the earlier palaces (Figs. 70, 72). On the first floor, the windows are surmounted by architraves on brackets, on the second and third by pediments of segmental circular and triangular shapes supported by classic colonnettes. These in turn rest on bases, as in Roman models, under which are the entablatures that replace the simple moulded string-courses of the 15th century style. At the ends of the façades are quoins, the alternately long and short projecting stones at the corners, which serve to frame it, and a strong accent is given the central axis by the projecting portal.

The portal gives access to a passageway leading to the central courtyard (Fig. 77). The elevation of the court is in three stories corresponding to those of the façade but differing from it in being decorated with applied orders. Their arrangement is based directly on the design of the Colosseum (Fig. 20) with Doric and Ionic columns on the first and second floors and Corinthian pilasters on the third. A further parallel with the Roman prototype is furnished by the base under each order and the ornamented friezes of the Doric and Ionic entablatures. The problem of the angle which



FIG. 77.—ROME. THE FARNESE PALACE. COURT.

taxed the ingenuity of the 15th century designers is solved here by using piers in the arcade, the one on the corner being heavier than the others and so constructed as to turn the corner. The windows resemble those of the façade in having triangular pediments in the second story and segmental ones in the third. The colonnettes used to give variety to the façade are absent here since that function is performed by the orders. The courtyard elevation is crowned by a balustrade which thus serves the same purpose as the exterior cornice though its effect is necessarily not so powerful. The contrasting effects of the Early and High Renaissance styles are seen in a comparison of this courtyard with that of

the Medici-Riccardi Palace (Fig. 70). The relative heaviness of the latter and its more classic details are obvious.

The palaces of the High Renaissance reflect the civilization that produced them but the spirit of the age appears in an even more monumental form in the Mother Church of Catholic Christendom, *St. Peter's* in Rome (Figs. 78-81). It stands upon the site originally occupied by the Old Church of *St. Peter*, one of the most important Early Christian basilicas, which was torn down to make way for it. The destruction of the old building and the erection of the new one furnish a striking example of the extent to which the

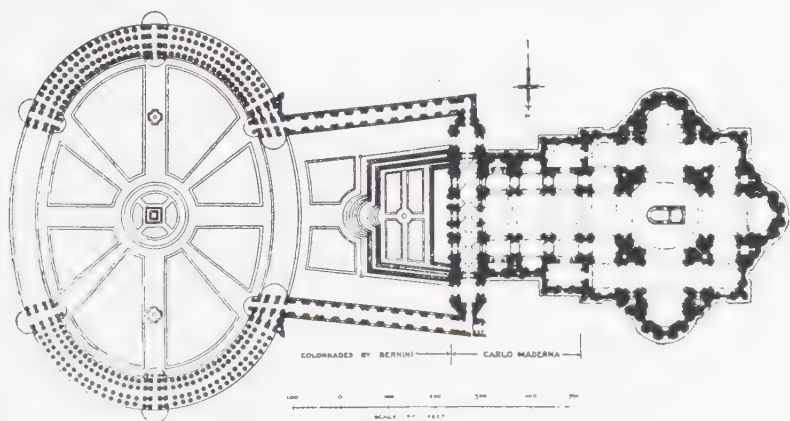


FIG. 78.—ROME. PLAN OF SAINT PETER'S. (ANDERSON)

powerfully individualistic spirit of the Renaissance swept everything before it, regardless of tradition or religious association. The point of view of expediency that considered the Colosseum only as a providential supply of easily accessible building material saw no reason to hesitate in destroying the venerable monument which commemorated the first bishop of Rome.

In 1505, Julius II instructed Michelangelo to erect a monumental tomb for him in the Basilica of *St. Peter's*. It was to be the greatest and most magnificent of its kind in the world, and the overweening pride of the pontiff led him to decree the destruction of the church when it became evident that the structure would not be large enough to contain the projected monument. Donato Bramante was appointed to design a building to replace

it. The plan he evolved was in the shape of a Greek cross with a dome over the crossing of the four equal arms where the tomb was to stand. Three other men were associated with him on the project, Giuliano da Sangallo, Fra Giocondo of Verona and Raphael the painter, the latter being Bramante's nephew. The four piers to support the dome were completed from Bramante's plans, but his death in 1514 and that of all his associates by 1520 put a



FIG. 79.—ROME. SAINT PETER'S FROM THE PIAZZA DI S. PIETRO.

momentary stop to the construction. Between 1520 and 1546, Baldassare Peruzzi and Antonio da Sangallo the Younger were in charge of the building. Both of them drew up plans for it that represented considerable modifications of Bramante's original but actual work went no farther than a reinforcement of the crossing piers.

In 1546, Michelangelo was appointed director of the construction and the main characteristics of the building as it appears to-day are due to him. In the plan which he drew up (Fig. 78), the Greek cross arrangement with a central dome, projected by

Bramante, was restored. A free-standing portico at the eastern end would have provided a monumental entrance without cutting off the view of the dome from in front of the building. The present façade (Fig. 79) is the work of Carlo Maderna (1556-1629) who failed to realize this; he turned the plan of the church into a Latin cross by adding three bays to the nave with the façade rising directly at the end. In 1667, a further addition was made by Lorenzo Bernini (1589-1680) in the Doric colonnades enclosing the vast piazza in front of the façade. It is ironical that Julius II should lie under an inconspicuous burial slab in the building instead of beneath the stupendous mausoleum projected by Michelangelo, an unhappy reduction of which is in the little church of S. Pietro in Vincoli in Rome, although it was partly to provide for it that the ambitious pontiff decreed the destruction of the old building and the erection of the new one.

From the east (Fig. 79), the colonnades by Bernini lead directly to Maderna's façade, which clearly lacks any effective relationship with the dome. From the square in front of the building, it cuts off the spectator's view of the drum and the base on which the dome rests. As a result, there is no smooth transition from the horizontal lines of the façade to the mounting arches of the cupola. It is only from the apsidal end that the full power of Michelangelo's design is apparent (Fig. 80). The dome rests on a base formed by the three arms of the apse and the transepts, all of which are decorated with huge Corinthian pilasters. The silhouette of this base merges into that of the drum through the small domes over the side chapels and then up into the bold curves of the great dome itself. Like Brunellesco's dome for the Cathedral of Florence (Fig. 66), that of St. Peter's is constructed in two shells and for a similar reason, namely, to make it the dominant feature of the exterior. The structural ribs are exposed both inside and out. The thrusts are buttressed by the great coupled columns around the drum and also by tie-beams embedded in the masonry. The dome of St. Peter's is the culmination of a development that began with the Pantheon and was continued in the domes of Hagia Sophia and the Cathedral of Florence. Even with the Pantheon literally before his eyes, it is doubtful if Michelangelo could have wrought his masterpiece of design and construction without Brunellesco's example to guide him. His success in achieving a monumental effect is attested by the many designs based upon the

dome of St. Peter's since the 16th century of which it may be said without exaggeration that none can surpass the prototype and few if any may even be considered its equal.

The interior of St. Peter's (Fig. 81) does not possess the same unity of effect that is seen in the apse. Ideally this unity should be attained through the domination of the entire interior space by the dome. Actually the latter is invisible from the greater part



FIG. 80.—ROME. SAINT PETER'S DOME FROM THE WEST.

of the nave and is entirely cut off from the side aisles by the huge piers of the arcade whose great size is essential to maintaining the stability of the whole gigantic structure. The magnitude of the physical forces involved in the construction required forms whose very size prevents an immediate comprehension of their relationship to the rest of the building. The design of the interior does little to correct this for it lacks scale. The Corinthian pilasters of the piers are nearly seventy-five feet high and the cherubs that decorate them almost ten feet in length but there is nothing in

the design itself to suggest such proportions. Thus since the ordinary conception of such forms is on a considerably smaller scale, and the mind unconsciously interprets them in terms to which it is accustomed, the building actually seems to be smaller than it is. The effect is that of a model which has been enlarged only in physical size and not in concept. It is monumental in quantity but not in quality and it is only after the original impression of the



FIG. 81.—ROME. SAINT PETER'S. INTERIOR.

interior has been renewed many times that its real immensity can be comprehended.

One outstanding trait of High Renaissance architecture demonstrated by St. Peter's is the tendency toward the use of gigantic forms. This is evident not only in the ensemble but in the details. The Corinthian pilasters of the nave and those on the exterior of the apse and transepts are examples. In the group of buildings designed by Michelangelo on the *Capitoline Hill* in Rome (Fig. 82), the same motive of a single giant order of Corinthian pilasters rising through two stories of the elevation can be seen. It is employed to give unity to the entire group, occurring on the façades

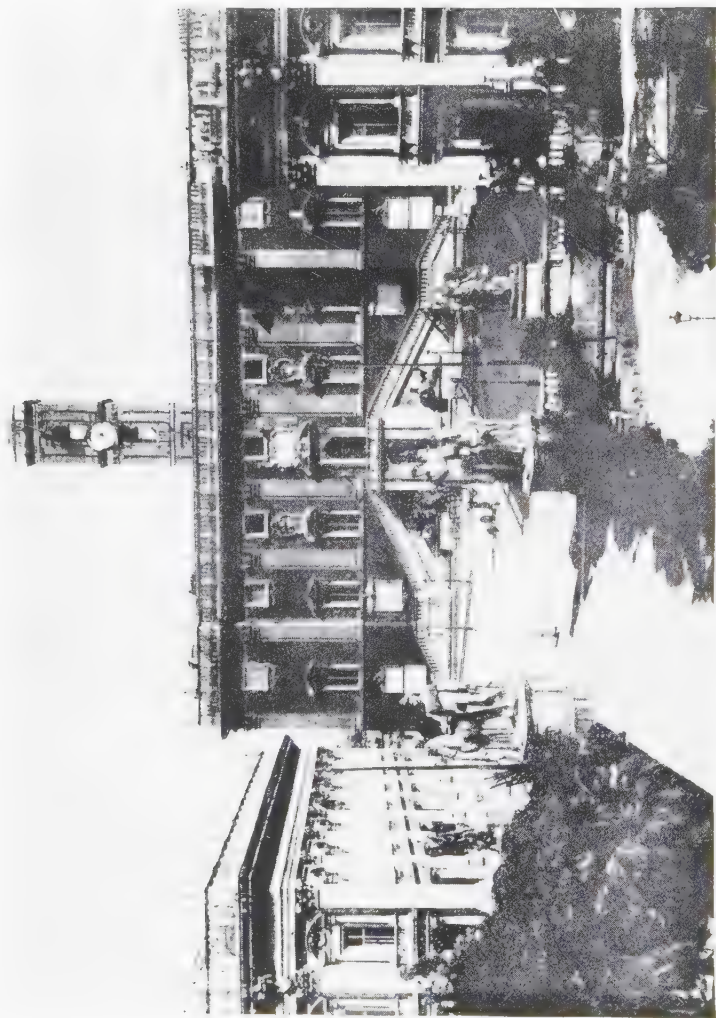


FIG. 82.—ROME. THE CAPITOLINE HILL.

of all three structures. The Senatorial Palace at the back dominates the two flanking edifices by being raised on a high podium. The façade is framed by projecting end bays and the central axis is emphasized by the great doorway approached by stairs from both sides. The windows of all three buildings are decorated in the High Renaissance manner with pediments supported on applied columns or pilasters. The unity of the group established by the giant orders and windows is emphasized in the uniform treatment throughout of the cornices with balustrades surmounted by sculptured figures which replace the heavy projecting cornice used on the Farnese Palace. The Capitoline buildings constitute one of the most important examples of group planning in the history of architecture. The ensemble is not as large in size as the forums of imperial Rome but in unity and impressiveness, it yields to none of its predecessors or followers.

The free and individual treatment of classic forms in Michelangelo's designs furnishes a sharp contrast with the stricter, more academic employment of the same elements that also appears in High Renaissance architecture. Andrea Palladio (1518-80) was a proponent of the latter method. His ideas were very influential in determining the character of many subsequent styles through the medium of the buildings he designed and his "Four Books on Architecture." In the latter, Palladio included a great many measured drawings of ancient buildings together with a codification of the orders which was widely adopted in later times. His veneration for the architectural practices of classic antiquity is clearly seen in his buildings, the first of which was the famous *Basilica* at Vicenza (Fig. 83). Palladio's design grew out of a reconstruction of the Gothic town-hall of the city, which had been erected in 1444. It consisted of a series of arcades applied to the older façade; the orders he employed make his knowledge of Roman structures of similar function quite evident. The superposed Doric and Ionic engaged columns support entablatures to frame the arches within. They are adapted to the previously existing Gothic framework by arches springing from intermediate smaller columns connected with the main order by small entablatures. This forms the so-called "Palladian motive," an arched opening flanked by two rectangular ones, which was destined to be very popular not only through the wide dissemination given it by Palladio's writings and reputation but also as a successful union of the arch and column

principles of support in a single design. Apart from this feature, the design of the Basilica is notable, for its unified effect as a whole, produced by the slight narrowing of the end bays, the vertical accents of the engaged shafts with their broken entablatures and the well-proportioned sculptured figures that surmount the balustrade. The columns of the minor order in each arch are doubled in depth and they combine with the beautifully weath-

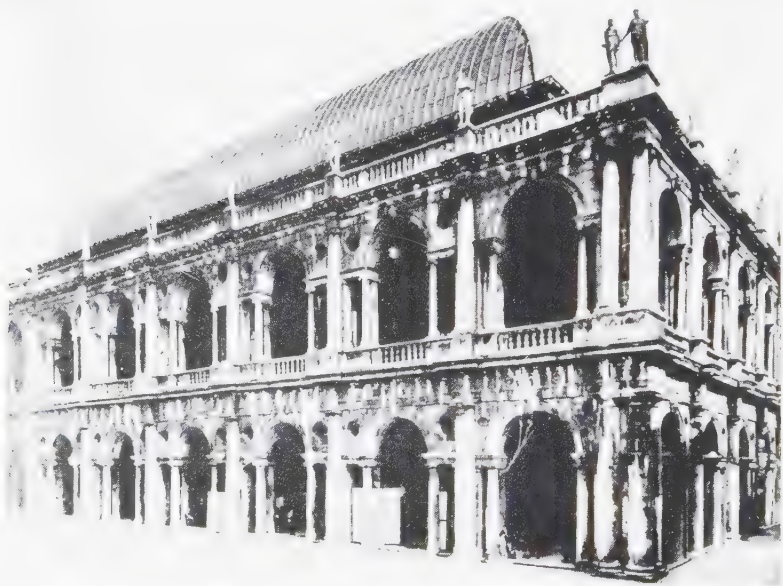


FIG. 83.—VICENZA. THE BASILICA.

ered stone to give a marvellously rich effect to the façade. In all his subsequent work, Palladio never surpassed this design with its pure and restrained use of classic elements.

In summation, the architecture of the Italian High Renaissance can be divided into three categories. The first, represented by Michelangelo, is characterized by a free and often willful use of classic forms, employed with only the slightest regard for their original function and manner of use. The second is embodied in the work of Palladio with its more traditional use of classic ele-

ments. The third category is formed of those buildings in which size and scale are exaggerated as in the giant order and in such actual hugeness of bulk as appears in St. Peter's. The tendency toward the use of large forms is found in both the free and academic classic styles; it was a result of the effort of the High Renaissance to invest the light and delicate forms of the 15th century with greater significance by changing them to massive and dignified ones.

C. THE BAROQUE PERIOD

The period subsequent to the High Renaissance in Italy is known as the Baroque. The height of its architectural style was reached between the years 1580 and 1730. In general, this style represents a continuation of that developed by the High Renaissance but with a gradually increasing emphasis on the free use of classic elements of design. They were employed as aids to a plastic treatment of form and space rather than as parts of arrangements in single planes. However, side by side with designs of this type are others in which the academic practices of Palladio and his followers were continued. While many of these latter are of a quality in no wise inferior to that of their more striking neighbors, they are definitely subordinate to them in number and influence. At its worst, the baroque style is bombastic, flatulent and not undeserving of the usual criticism that it represents only a degeneration of High Renaissance ideals. But at its best, there is a unity and variety of plastic and spatial effects in the Baroque which is undeniably exciting. At no other time in the history of architecture have designs been created with so much regard for their effect upon the observer as spectacle and display. With this end in mind, the baroque masters achieved a new synthesis of the arts by using painting and sculpture as integral parts of their architectural designs. More than this, even the purely architectural elements were employed in such a way as to attain effects closely akin to those of the representative arts. A column twists and turns or a pediment is broken, denying intrinsic architectural function for the sake of an effect of form handled plastically as in sculpture. Or a façade is designed in many planes, creating a play of light and shade and suggesting depth as in a painting.

The stimulus that produced this development is found in the historical background of the period. It was the time of the

Counter-Reformation. The Church was marshalling all its resources to oppose the ascetic and intellectual Protestantism that was undermining its power in the North; foremost among those resources was the tremendous emotional appeal of the arts. Once before had the Church utilized the arts as a means of establishing ascendancy over its adherents. In the Middle Ages the melody of the Gregorian plain-song and the color of the stained-glass window had elevated the devout to spiritual heights. In the 17th century, the motet by Palestrina and the indescribably complex fusion of architecture, sculpture and painting in the baroque church led to the same end. Between the two periods, there is a very significant difference, however. The spiritual truth which was intuitively perceived through the medium of the medieval synthesis had its origin in the intellectually created system of scholastic philosophy. In the baroque period, on the other hand, the whole process from the first perception of truth to its final realization was an emotional one.

Like the High Renaissance before it, the Baroque developed its architectural style on the foundation of that which had preceded it. The modifications made in the High Renaissance manner were in the direction of more plastic effects of form and space as has been mentioned. The methods by which these modifications were managed originated with Michelangelo. In the *New Sacristy* or *Medici Chapel* in San Lorenzo in Florence (Fig. 84) which was built between 1521 and 1534, Michelangelo achieved a powerfully emotional effect in his treatment of form. Classic details appear in all parts of the design but never have they been used in a less classic manner. They are used in a way which is much more sculptural than architectural. The coupled columns on either side of the seated figure do not support anything but serve as accents of plastic form, subordinated to the reclining figures below. Note the way in which the bases are obscured by the heads of those figures and the cutting of the stringcourse by various parts of the bodies. By thus shattering the unity of the architectural forms, an impression of instability and discord is created. Viewed objectively, this is sculptural architecture for the entire design centers around the symbolic figures reposing on the perilously inclined lid of the sarcophagus. It was the desire of the High Renaissance to invest its forms with significance that led to this arbitrary treatment of architectural elements. The possibilities thus revealed of archi-

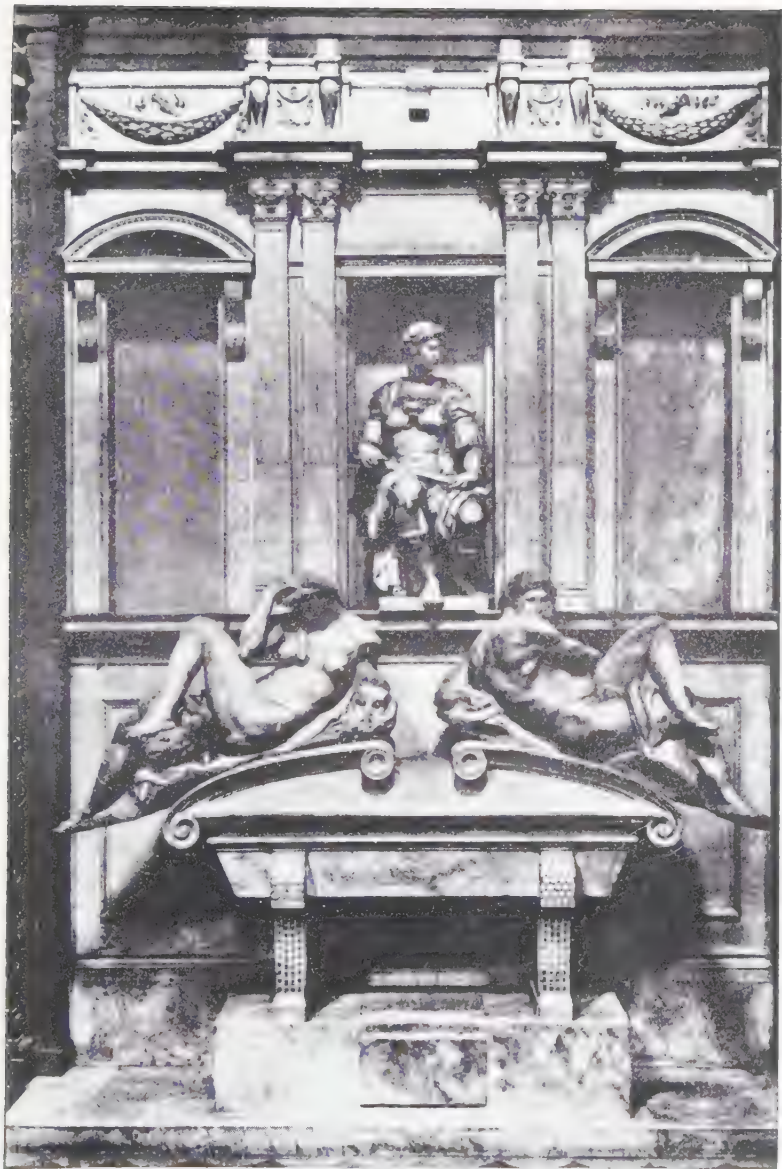


FIG. 84.—FLORENCE. SAN LORENZO. THE MEDICI CHAPEL.

ecture as a vehicle for the expression of abstract emotion were even more completely realized by the later baroque masters. The paintings originally planned for the empty niches on either side of the seated figure would have completed the baroque synthesis which appears here in embryo.

In the Medici Chapel, Michelangelo anticipated baroque effects of form. The treatment of space in the baroque manner is also forecast in Michelangelo's architectural designs in the group of buildings on the Capitoline Hill in Rome (Fig. 82). The palace façades along the sides are not parallel to each other nor perpendicular to that of the Senatorial Palace at the back but diverge from the point of view of a spectator standing at the summit of the steps by which the top of the hill is reached. This divergence creates an impression of expanding space which thereby acquires an organic life of its own. The spatial effects in baroque architecture are no more powerful than in the Roman, but they are different in character. For the Roman, space was objective but inert; for the baroque master, it has a life that is no less real or important than that which he infused into his great plastic façades and interiors. In the Capitoline group, the spatial effect is made even more positive by the design in the pavement which centers about a Roman equestrian statue of Marcus Aurelius with lines radiating in all directions.

In the baroque period itself, the tendencies latent in Michelangelo's designs become clearer. The arrangement of the great colonnades enclosing the square in front of the Church of St. Peter in Rome (Fig. 79) is dictated by a desire on the part of the designer to achieve a powerful suggestion of space. They were designed by Gian Lorenzo Bernini (1589-1680), the greatest Italian master of the Baroque both as architect and sculptor. They are composed of Doric columns which are very classic in form but the plan as a whole (Fig. 78) is essentially baroque. The space surrounding the obelisk is elliptical with fountains at the foci. Furthermore, the straight colonnades leading from the sides of the ellipse are not parallel but diverge towards the façade just as do the flanking buildings of the Capitoline group. This makes the depth of the piazza seem much greater than it actually is. Again the aim of the architect was to give vitality to an effect of space. Other elements contributory to this effect are the pavement with its radiating lines and the central obelisk which is a stable point

in the fluid space of the entire composition. By being placed directly on the main axis of the building, the obelisk forces the spectator to one side thus making the plane of the façade recede into space instead of cutting it off. The obelisk also serves as a point of departure into space, increasing its apparent depth and giving scale to the façade of the building. The consistent and unified effect of the piazza does much to redeem the ineptitude of Maderna's façade.

In the *Baldacchino* over the high altar of St. Peter's (Fig. 80), Bernini achieved a typically baroque solution of both formal and spatial problems. It stands as high as an eight-story building and is of bronze taken from the Roman doors of the Pantheon wrought into four spiral columns supporting a canopy. The spiral form of the columns was adopted 'to make the structure seem large enough for the space it occupied, for Bernini realized that in the vast interior of the building, even the huge proportions of the projected design would be dwarfed unless they were made to appear larger. This is the effect of the columns which twist upward creating a sense of movement by which the *baldacchino* is made to appear capable of filling the entire space under the dome. There is no better example of the exciting effects which were the aim of the baroque architect.

In the façade of *Santa Maria della Pace* in Rome (Fig. 85), Pietro da Cortona (1541-1604) embodied most of the principles of baroque architectural design. Completed in 1656, it represents a careful balance between the academic and free tendencies in the use of classic details which is unusual for the period. The semi-circular porch has coupled Doric columns and an unbroken entablature which are quite pure in style. The upper story is composed in contrasting planes, convex to the mass of the building. Pilasters and columns appear side by side and the main gable of the façade encloses a segmental one whose bottom is broken to permit the insertion of an irregular cartouche. Both of these forms, the broken pediment and the cartouche, were favorites of baroque designers. The convexity of the façade is emphasized by two concave wings projecting forward from the sides of the building. The whole façade achieves an effect of formal and spatial complexity with a variety of aspects that is typical of the baroque style. It should be compared with a High Renaissance façade like that of the Farnese Palace (Fig. 76). The latter is designed in a

single plane. Without the relationship to that plane, the projecting window openings, for example, would have little meaning. More than this, there is nothing in the façade to suggest the existence of the other sides of the building. It is complete and self-sufficient and without any spatial implications. Few of these considerations apply to the baroque façade. Here the entire emphasis is on oblique angles and a variety of viewpoints. The spec-



FIG. 85.—ROME. SANTA MARIA DELLA PACE. FAÇADE.

tator passing around the building would observe many different effects, but all of them would be related to each other. A design with this end in view inevitably carries with it a suggestion of space.

The baroque interior was similarly designed in terms of space effects as can be seen in that of the *Gesù* in Rome (Fig. 86). It was begun by Vignola (1507-73) in 1568 although his designs were somewhat modified by his pupil Giacomo della Porta before the building was completed. It was consecrated in 1584, but the

present decoration of the interior was not finished until 1683. As the mother church of the Jesuit order, it established a type that was reproduced wherever the missionaries of the order went, a fact that gave the baroque or "Jesuit" style an international character. The nave is broad with barely projecting transepts, a disposition which was the result of the greater importance of the sermon in the Jesuit service. A single barrel vault covers the nave with



FIG. 86.—ROME. THE GESÙ. INTERIOR.

penetrations from the clearstory windows. Its plain surface, before being covered with the painted and stucco figures now visible, produced a powerful impression of closed space through which the eye of the spectator was directed toward the central dome and the apse. The effect of movement in depth now experienced in the nave depends chiefly upon the boldly projecting cornice to which the openings into the side chapels are definitely subordinated so that the unified space of the nave may not be encroached upon. The dome over the crossing has the effect of broadening this space which is then narrowed down by the arch

of the choir and completely enclosed by the semi-dome of the apse and the wall on which it rests. The lighting of the interior is very skilfully planned to achieve a similar movement. It is ample and diffused in the nave, and becomes more intense under the dome, from which the eye escapes with relief into the semi-gloom of the apse. The composition is thus one of space articu-



FIG. 87.—TIVOLI. THE VILLA D'ESTE.

lated and unified by linear effects and the lighting. Its purpose is to focus the attention of the observer upon the altar which thus becomes the heart of the building in fact, as it is symbolically the mystic shrine of Christ's blood and body.

A characteristic manifestation of the baroque preoccupation with space is seen in the union of architecture and landscape that appears in the great country estates established in the 16th and 17th centuries. The *Villa at Tivoli* (Fig. 87) is one of the finest

of these, built for the Este family. Vignola was the architect of the building which was erected in 1546 and Pirro Ligorio designed the gardens. In them the desire of the baroque architect for broad and varied effects was given the broadest scope. It found expression in the many terraces and avenues of trees designed to focus attention upon some detail of the building and given variety by the numerous fountains. The never-ending movement of water over rocky surfaces or in plumes of spray was a perfect adjunct to baroque effects and it was introduced whenever and wherever possible.

With the end of the Baroque period, Italy's architectural leadership in Europe was yielded to other countries. Weak politically and economically, her artistic vitality was also exhausted and her artists were capable of doing little more than to accept the ideas emanating from France where the Academy ruled triumphant. Under this influence, Italian architecture subsided into ineffective classicism. Occasionally, some design of the 18th and 19th centuries will reveal a trace of the old creative spirit but the few examples of this only serve to emphasize the too apparent sterility of the period. Outside of Italy, conditions were different. During the early years of the 16th century, the Renaissance spirit had made itself generally felt throughout western Europe. An inevitable effect of this was to modify the medieval styles that still prevailed in the countries north of Italy. The results of this modification will now be considered.

CHAPTER X

RENAISSANCE ARCHITECTURE IN FRANCE

TOWARD the close of the medieval period in France, the Gothic synthesis embodied in the great cathedrals was breaking down. French art of the 15th century followed a line of development which revealed a point of view not unlike that of the Early Renaissance in Italy although the forms by which it was expressed differed fundamentally from the classic ones current in the southern peninsula. Thus comparison of the façade of Rouen Cathedral (Fig. 60) with that of S. Francesco in Rimini (Fig. 73) would hardly suggest that the latter was built fifty years earlier than the former if both are judged by the classic elements in them. Both, however, are the expression of a spirit of individualism which marks them off quite distinctly from the communal art of the 13th century. They reveal a departure from the principles of the earlier period along lines which were indigenous. In S. Francesco, this departure is evident in the classic forms to which Italy naturally reverted when she freed herself from the dominant French Gothic style. The only reason Rouen Cathedral reveals no such definite break with the immediate past is that the inborn tradition in France was one of medieval forms just as that of Italy was classic.

The *House of Jacques Cœur* in Bourges (Fig. 88), built in the last half of the 15th century, demonstrates the persistence of medieval forms in France as well as the modifications to which they were subjected. Jacques Cœur was a wealthy merchant whose position in his native city was comparable to that of Cosimo de' Medici in Florence. His house is still very medieval in the irregularity of the roof line and the lack of symmetry in the design which is the result of the irregular site on which it stands. Other medieval characteristics are the traceried window of the central pavilion, the crocketed gable of the dormer window, the pointed arches of the portals and the architectonic nature of the decorative sculpture. The windows, however, are rectangular and quite small as compared with the large openings traditionally employed in

Gothic design. Other variations from the earlier style are in the colonnettes that frame the windows, the decorative panels under the sills and the stringcourse that divides the façade horizontally. The effect of these details is somewhat similar to those visible in Italian buildings of the same period, but there is nothing in their forms to suggest an actual connection with Italy. In every respect, the design is the logical outcome of an indigenous stylistic development, uninfluenced by any foreign manner.

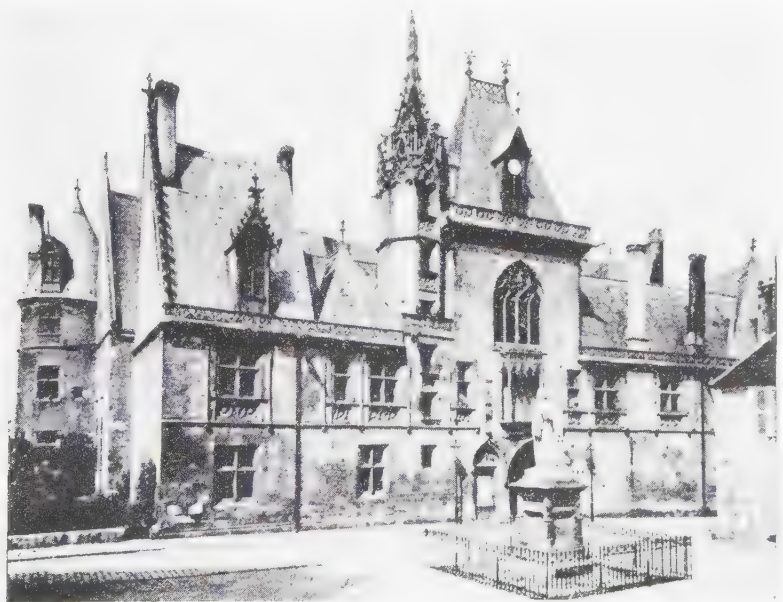


FIG. 88.—BOURGES. THE HOUSE OF JACQUES CŒUR.

The French character of Jacques Cœur's house is particularly evident in the irregular roof line when compared with a typical Early Renaissance palace in Italy (Fig. 70). In the latter, the flat roof plays no part in the design. Chimneys are masked by the façade which rises directly from the street for nothing is permitted to break the rectangular unity of the outline. In the French example (Fig. 88) the sharply-pitched roofs are a prominent feature of the exterior. They are necessary to throw off the rain and snow of the severe northern climate. Climatic conditions also explain the numerous chimney stacks since each room is provided

with its own fireplace. The high roofs make possible a room under the gable which is lighted by dormer windows. Roof, dormers and chimneys all contribute to the verticality of the design which is another of its medieval qualities.

In spite of these medieval elements, the impression of the building is different from that of a 13th century ensemble. The reason for this difference is the insistence on each part of the design as something worthy of attention in its own right. Instead of the abstract unity of the 13th century building, there is an emphasis upon miscellaneous but fundamental experiences. This is the architectural equivalent of the individualism of the period. Another manifestation of it is seen in the fact that the finest buildings of this time are private houses and town halls rather than churches. In other words, 15th century France was advancing along lines similar to those already observed in the development of 15th century architecture in Italy. In both cases, that advance is revealed by the use of forms that were traditional. There is a difference in the forms in that they were classic in Italy and Gothic in France, but the spirit animating them was the same. A rebirth of the individual was taking place in both countries; in the northern one, it differs from that in the southern only in that it involved no complete break with the immediate past.

Had the Renaissance in France been left to follow its natural tendencies, its architecture would doubtless have been very different in character. Actually, the course of its development was turned into new channels as a result of strong alien influence, *viz.* that of the Italian Renaissance. The explanation of this is to be found in the history of the period. The feeling of national solidarity that followed the expulsion of the English in 1453 by French troops under Joan of Arc soon found expression in aims of conquest and territorial expansion. For a period of sixty years after 1495, the French kings, beginning with Charles VIII, attempted to establish claims to feudal rights in various parts of Italy. Under Charles' successors Louis XII, Francis I and Henry II, a continuous series of military campaigns took thousands of Frenchmen into the southern peninsula. There they came in contact with examples of the still vigorous Italian Renaissance style, and the strong Latin element in the French temperament reacted to the re-vitalized forms of classic antiquity with an enthusiasm

comparable to that which the Italians had revealed in creating them. To the Frenchman, accustomed to the still grim and heavy walls of his native buildings, the late 15th century Italian palaces must have seemed marvels of grace, and the wealth of sculpture and painting that decorated them affected him like a draught of heady wine. The result of this was the eventual complete abandonment of the native architectural tradition represented by Jacques Cœur's house in favor of a new Italianate style.

This was not equally true in all parts of France, to be sure, nor of all types of buildings. In the provinces, the old tradition continued after it had died out in the urban centers. The Gothic style was also preferred for churches long after the introduction of new modes of design for secular buildings. But in court circles, enthusiasm for the new style swept the native tradition before it. The nobles who had gone with their rulers to Italy returned with a new and biased point of view toward the castles which they had inhabited. The monarchs themselves were in the forefront of those who chanted the praises of the Italian style. As a result, it soon became established as that of the *haute monde* and popular taste was not long in turning into the path thus indicated.

The first examples of French building in the Italian manner show little understanding of it. The reason for this is not hard to discover. As has been pointed out, the medieval style was evolved from constructive requirements while that of the Italian Renaissance developed almost entirely in solving problems of form and design, and in the translation into French, the gap between decoration and construction was widened. This furnishes an explanation for the contrast between the early Renaissance architecture of France and that of Italy.

The château of *Azay-le-Rideau* (Fig. 89) which was built between 1518 and 1524 reveals the combination of medieval construction and Italian decoration which characterizes the Early Renaissance in French architecture. The heavy round towers at the angles suggest the donjons of the fortified feudal castle and the picturesque, irregular skyline is also a medieval trait. The plan, however, is L-shaped in contrast with the medieval arrangement which consisted of wings flanking an open court. For this reason, the principal façade is on the outside of the building instead of in a courtyard as at Blois for example. On the façade, pilasters frame the window openings, the order appearing over a

base. The dormer window pilasters support a delicately carved entablature as do those of the central portal. The ornament consists of classic foliate motives surrounding the salamander, heraldic emblem of Francis I. Prominent stringcourses indicate the stories in elevation but the cornice of the angle towers is a heavy projecting member suggestive of the medieval battlement (Fig. 66).

Azay-le-Rideau belongs to the early period of the French Renaissance which lasts from 1495, when Charles VIII returned from his first invasion of Italy, until about 1545. The High Renais-

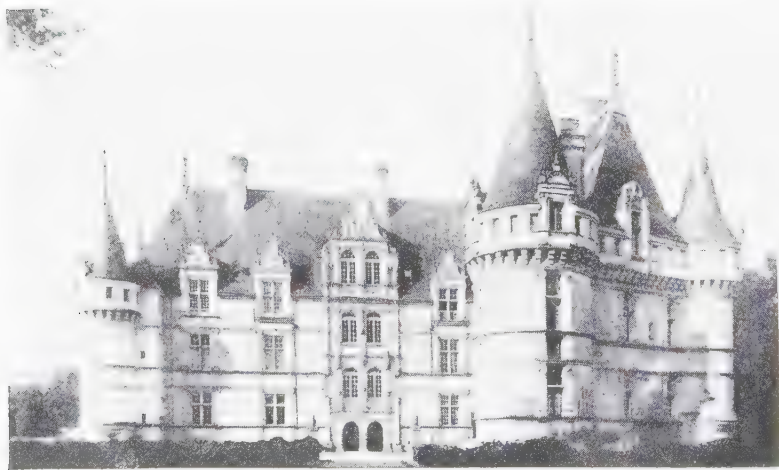


FIG. 89.—AZAY-LE-RIDEAU. THE CHÂTEAU.

sance that followed it dates from 1545 to 1590. It may be considered to have begun under Francis I, to have reached its climax under Henry II and to have declined under Charles IX and Henry III. During the High Renaissance, a strong Italian influence on French architecture is evident, but its character is somewhat different from that apparent in the earlier period which came chiefly from the North Italian schools. This was because the conquest of Milan by Francis I established close relations with that region. During the High Renaissance, the Italian influence on French architecture emanates from the Roman school established by Bramante and his followers; it is evident in the greater degree of formalism in French design and a fuller understanding of the

classic forms that were employed. One factor that contributed to this result was the importation into France of a considerable number of Italian architects under the patronage of Catherine de' Medici of the famous Florentine family who was the queen of Henry II. None of these architects were the equals of Michelangelo or Palladio but they were competent and well-versed in the academic High Renaissance tradition. The most influential were Primaticcio and Serlio, the latter as distinguished for his theoretical treatises on architecture as for his executed designs. To the influence of the imported Italian architects was added that of many Frenchmen who had travelled and studied in Italy. Pierre Lescot, Philibert de l'Orme and Jacques Androuet du Cerceau were among them, the last two also known for their written works. As a result of the influence of Italians and Frenchmen alike, French architecture of the High Renaissance differs as suggested above from that of the preceding period.

In the courtyard of the *Louvre* (Fig. 90), the royal palace in Paris, the style of the French High Renaissance is embodied. It represents a re-building of the Gothic château which had served as the royal residence until it became inadequate. Francis I began its reconstruction but he died in 1547 before a great deal had been accomplished. The work continued under Henry II who appointed Pierre Lescot (1515-78) as his architect, with Jean Goujon (1510-72), an architect in his own right and one of the foremost sculptors of the time, assisting him. Of Lescot's design, only the west and south wings that once enclosed a central court remain. The plan was typical of later Renaissance structures in France. It consisted of a court of honor enclosed by a principal wing from which two subordinate ones extended, the side opposite the main wing being filled in with a screen wall or by minor parts of the palace. Other courts might open out behind the main wing, as in the Louvre at present where the original court of honor has been made a subordinate one. In the illustration, the portion to the left is Lescot's work. This part of the building was originally nine bays in length. The end and center bays are emphasized by the decoration of coupled columns instead of the pilasters used between them. The circular angle towers of the earlier style as at Azay-le-Rideau (Fig. 89) have been replaced by rectangular end pavilions. The decoration as a whole is much more classic than that of the older building, consisting as it does of superposed

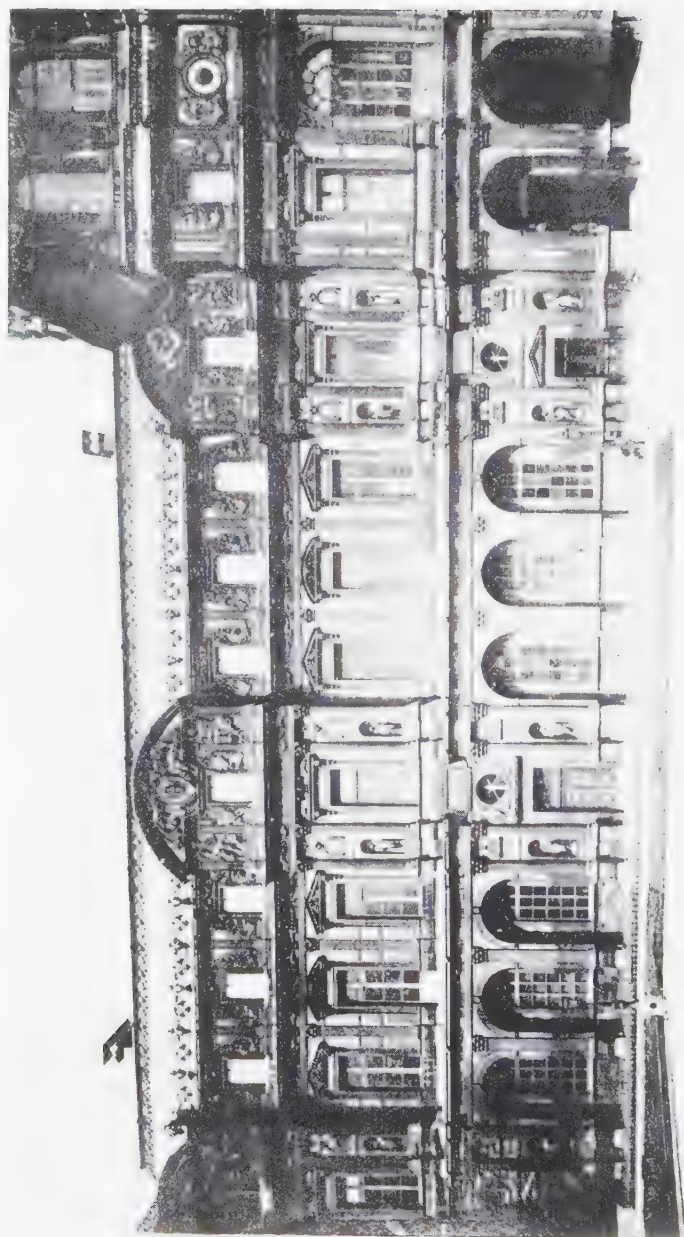


FIG. 90.—PARIS. COURT OF THE LOUVRE.

orders with bases, following the precedent of the High Renaissance in Italy. The vertical accent given by the end pavilions is French rather than Italian as are also the circular pediments, the relatively large openings and above all, the profusion of sculpture which is largely the work of Jean Goujon. In the fine execution of the details and their relationship to the ensemble, in the well-designed proportions and the variety of a restrained and dignified scheme, Lescot's design for the Louvre takes a place with the Italian masterpieces of the High Renaissance. His classicism is as pure and scholarly as Palladio's yet it is essentially French in spirit and not a mere aping of the mannerisms of other styles. This is particularly true of the combination of engaged columns and pilasters that gives a characteristically French emphasis to the angles but does it by means of well-understood classic forms.

Up to this point, the development of French Renaissance architecture was very similar to that of Italy. Beginning with a modification of medieval effects by the use of classic decorative detail, it progressed toward a more thorough integration of detail and ensemble. Also as in Italy, there was a tendency to use classic forms freely as well as academically. In the period that followed the reign of Henry II, the trend in French design is in the former direction, resulting in very definitely baroque effects in the buildings erected between 1590 and 1638. The climax of this tendency is reached in the Luxembourg Palace, built for Marie de' Medici, the design of which was based on that of the baroque additions made to the Pitti Palace in her native city of Florence. As in Italy, the French baroque style involved a combination of architecture with sculpture and painting. The most brilliant example of this synthesis appears in the mural paintings executed by Peter Paul Rubens for the Luxembourg Palace to celebrate the nuptials of Henry IV and Marie de' Medici.

The baroque tendency that appeared in French architecture at the close of the 16th century might possibly have produced results comparable to those in contemporary Italy had it not been checked. But once more, as at the end of the 15th century, French architecture was subjected to influences that changed its character profoundly. One of these influences which was indirect, but none the less powerful for that, was the traditionally systematic mode of French thought which had evinced itself in the sweeping and comprehensive synthesis that produced the Gothic style. To a tempera-

ment capable of producing such a synthesis, the unrestrained effects of the Italian baroque must have been very distasteful. More obvious in its effect upon French architecture because its influence was more direct was the tendency toward centralization of power and the placing of absolute control over all activities in the hands of a single person or group of persons. This was true not only in France but throughout continental Europe. In Italy, the principle of absolutism was embodied in the Papacy; in France it was political in character for all power was vested in the king, a mode of government summed up in Louis XIV's famous epigram "L'Etat, c'est moi." This principle of absolutism was the principal factor in determining the character of all aspects of French life during the *Grand Siècle*. In art, it resulted in the establishment of the Academy of Letters in 1635, the Academy of Painting and Sculpture in 1648 and the Academy of Architecture in 1671.

The nature of the style to which the Academy gave its sanction was a more or less foregone conclusion. The classic habit had been firmly fixed in French minds by over a century of close contact with the art of Italy. This, together with the inherited taste for system and order, established even more firmly the academic tendencies already apparent. No longer were architects permitted to draw at will upon the classic repertory for forms which they used according to their own tastes. Instead, they were forced to an exact and scrupulous study of Roman buildings whose details they could do no more than reproduce. This was the immediate outcome of the establishment of the Academy of Architecture in 1671 and the tendency thus revealed was given final and definitive form by the foundation in 1677 of the French Academy at Rome. The result was the complete domination of French architecture by an ideal of design based directly on Roman usage and the interpretation thereof by the academic French and Italian architectural theorists.

The significance of the foundation of the Academies is considerable. They mark the final divorce of artistic creation from the life of the people, a separation which had been begun in France with the importation of the Italian style. Furthermore, by placing the arts directly under royal patronage, they were made subject to a regular rule and the artists were established as a group apart, owing allegiance only to the abstract ideal imposed upon them

by that rule. This ideal was one of *a priori* perfection, based on antique art as seen through the eyes of the Italian Renaissance. The inevitable consequence of this attitude was a conviction that artistic quality is a thing to be determined by laws and regulations, without any necessary relation to the civilization that produced it. This attitude persists today, for although there are many criteria other than the classic by which art is judged, there is still the notion that it can be judged only by the select few to whom its mysteries have been revealed.

The effect of the Academies was extensive and varied but two results are outstanding. The first was the consistent unity which French art acquired in consequence of the influence of the Academies since all creative efforts in one field had to conform to the same rules. This undoubtedly raised the level of much poor work but it also reduced that of genius to the same norm. The second result, which was even more pernicious in effect than the artificial unity maintained by the Academies, was the establishment of a pedagogical point of view. By proclaiming an immutable standard of beauty, art was made a matter of theory that could be learned intellectually instead of through an inductive training of hand and eye. Artistic creation had to be effected according to a formula, and even though that formula was based on the classic which had been developed inductively, it remained no less an intellectually conceived thing.

The outstanding architectural examples of the 17th century in France were a direct result of the imperialistic ideas of Louis XIV. They are the enlargements of the royal palaces in Paris and at Versailles. The king himself was interested only in the latter but his minister Colbert felt that a monumental residence in the capital city was essential to royal dignity and the enlargement of the building designed by Lescot was undertaken. The alteration consisted in additions to the 16th century structure to which other additions had already been made at the beginning of the 17th century. Various plans submitted by native architects were felt to lack the necessary grandeur, and in 1665, Bernini was summoned from Rome. He was received with the acclaim due the greatest architect of his period, but the design he produced for the rebuilding of the palace was not acceptable as it involved practically the entire destruction of the existing edifice. The cornerstone of his proposed plan was laid, but his design was dis-

carded after his departure from Paris and the work was given over to Claude Perrault (1613-1688). His assistants were Charles Le Brun, the painter, and Louis LeVau who had already designed an expansion of Lescot's court of honor.

Perrault's executed design for the *Colonnade of the Louvre* (Fig. 91) on the east front was completed 1667 and 1674. Much of it was derived from Bernini's rejected project, notably the giant order over the ground story which is treated as a basement. The flat roof masked by a balustrade is an Italianism which doubt-



FIG. 91.—PARIS. COLONNADE OF THE LOUVRE.

less came from the same source. Perrault retained the traditional French disposition of the façade in five parts, however, with slightly projecting end and center pavilions, the latter with a pediment. Moreover, he enriched the classic vocabulary of his style by using coupled free-standing Corinthian columns for the giant order instead of engaged columns or pilasters. The design is not uniformly successful throughout. The relationship of the central pediment and the balustrade is open to criticism as well as the springing of the arch over the main entrance from the stringcourse of the first story, which made it break into the one above. But these are minor defects in a well-proportioned and unified design to which a fine play of light and shade created by the coupled columns

gives variety and which possesses an effective and stabilizing balance of solids and voids formed by the projecting pavilions in the colonnade. The net result is a consistent embodiment of the spirit of the *Grand Siècle*. The majestic dignity of the building is an eloquent testimonial to the absolute power of the monarch who erected it. It is this quality of the design that did much to establish it as a formula which became almost standard for monumental buildings from the end of the 17th century to very recent times.

Even more complete as a symbol of the principle of absolutism is the *Palace of Versailles* (Figs. 92-94). It was the result of a

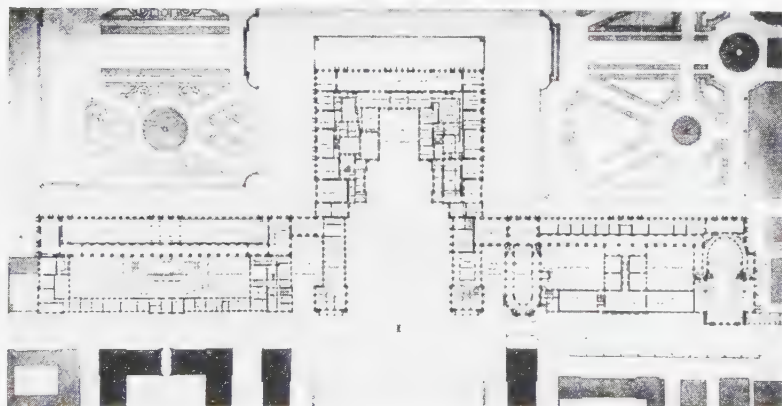


FIG. 92.—VERSAILLES. THE PALACE. PLAN. (GROMORT)

reconstruction in 1661 of Louis XIV's favorite hunting lodge which transformed an unpretentious brick structure into a vast palace unapproached in size before or since in buildings of that type. The drain upon national resources that this transformation involved was unprecedented. The size and pretentiousness of the building were out of all proportion to its function. Nothing could demonstrate better the total lack of relationship between art and life in 17th century France than the attainment of architectural grandeur at the expense of social and economic equilibrium. The plan (Fig. 92) is typical of the French palace with wings opening out from a central court in which the roads built by Louis XIV from Paris to Versailles came together. Behind the palace are extensive formal gardens laid out with terraces and fountains

in the baroque Italian manner and symmetrical with regard to the main axis of the building. The *Garden Front* (Fig. 93) was designed by Jules Hardouin Mansart (1646-1707) but includes much pre-existing work. It is in three stories, a heavy rusticated basement with arched windows surmounted by an order and topped off by an attic story with a crowning balustrade ornamented with vases and sculptured figures. The long expanse of the central block and its flanking wings is varied by projecting pavilions with free-standing columns. Within, almost the total length of the central block is taken up in the second story by the famous *Galerie des Glaces* (Fig. 94) designed by Charles Le Brun. Here the austerity of the exterior is replaced by baroque exuberance. The vaulted ceiling which is decorated with paintings and stucco ornament



FIG. 93.—VERSAILLES. THE PALACE. GARDEN FRONT.

rests on the broken entablature of the Corinthian pilasters of the walls. Between the pilasters are arched mirrors from which the name of the hall is derived. The ostentation of this union of architecture, sculpture and painting forms a striking contrast to the severity of the exterior.

The significance of Versailles in architectural history goes beyond the details of its design. As an example of large-scale planning, it exercised a tremendous influence, notably in the arrangement adopted only a little over a century later for Washington, D. C., by Charles de l'Enfant, to name but one of many plans based on it. But even more significant than this is the insight it gives into the working of absolutism as a governing principle. The arbitrary creation from the ground up of an entire city was what might have been expected from a logical application of that principle as opposed to the idea of organic growth. The design

itself is determined on a similar basis of rule and regulation. Its mathematical order is graphically demonstrated by the tyranny of the central axis in the disposition of the garden front so that it fills exactly the angle of human vision from the central point of the upper garden terrace. Nothing could be more academic than such insistence upon a geometric abstraction as the dominant principle of a design. It is not for nothing that the 17th century in France was that of Descartes.



FIG. 94.—VERSAILLES. THE PALACE. THE GALERIE DES GLACES.

The trend of French architectural development from the beginning of the 16th century to the end of the 17th is graphic evidence of the changed function of art after the final death of the medieval point of view. The classic style, introduced by king and nobles as an exotic thing, was soon divorced from the medieval construction to which it served as a decorative adjunct to become a rigidly enforced canon from which there was no departure. The training of artists was taken away from the trade guilds who had exercised that prerogative during the Middle Ages and given over to the Academies. In consequence of this, art was isolated from environment, its source of life and vitality. It was no longer the literature of the people but a source of amusement for the

great who forthwith imposed upon it ideals of formal unity and artificial perfection similar to the political ideals they forced upon a populace which had no part in their formulation. The social order resulting from the arbitrarily created political institutions consisted of two classes, the nobility and the common people, separated by an abyss which could not be spanned. Art was the plaything of the former and had nothing to do with the latter, a fact illustrated by the palace of Versailles whose construction swallowed up the taxes of decades and whose upkeep even today is a source of enormous expense. Reactions were inevitable. The immediate one was away from the severe formality of 17th century society and art toward frivolity and license in manners and design. The boudoir replaced the salon as the center of social intercourse. But this reaction was a superficial one at best. It only served to emphasize the social disparity created earlier and to hasten the revolt which took place toward the end of the 18th century in the French Revolution. From the resultant social and economic upheaval, there emerged a new class whose ideals ultimately found expression in the art of the Romantic Movement.

CHAPTER XI

RENAISSANCE ARCHITECTURE IN ENGLAND

THE history of Renaissance architecture in England is very similar to that in France. However, the firmly-established Gothic style had not been as much disturbed there by wars as it had across the Channel and as a consequence, the beginning of the 16th century in England saw no apparent wane in the vigor and originality of the medieval tradition. Some of its most distinguished English examples, such as Henry VII's Chapel at Westminster, were begun after the High Renaissance in Italy was in full swing. The long-continued vitality of the medieval style combined with England's geographical isolation and her natural conservatism to delay the appearance of Renaissance forms there to a period later than in any other European country.

The reconstruction of *Lord Leycester's Hospital* at Warwick (Fig. 95) in 1571 is an illustration in point for it reveals no influence of Italian ideas either in general design or construction. The lack of symmetry in the façade and the sense of the whole structure as an organic growth resulting from the rambling additions to the main block have both been noted before as typically medieval. The gable roof and prominent chimney stacks are features which English medieval design possessed in common with French. The construction is of the type known as half-timbered work. It consists of a frame of timber posts joined by horizontal and diagonal beams with the spaces between filled with brick or other material that was sometimes, as here, covered with plaster. This was the favored method of building small structures in medieval England. The results were as straightforward in expression of structural fact as the more monumental style of the cathedrals. Many houses of the Elizabethan period that were built in this way have been preserved, and it is sometimes referred to as the Tudor style.

As in France, the first appearance of Renaissance details in English architecture occurs in buildings erected by royalty. The

tomb in which Henry VII lies under the flamboyant Gothic vaults of his chapel at Westminster Abbey is probably the first example of Italian Renaissance work in England, dating from 1516. It was designed by Pietro Torrigiano, a Florentine who had been forced to fly from his native city after a brawl with Michelangelo. The fashion set by Henry VII's tomb led to the importation of other Italians who worked side by side with English artisans on such buildings as Hampton Court, erected by Cardinal Wolsey and Henry VIII from 1515 to 1536. This phase of the Renais-



FIG. 95.—WARWICK. LORD LEYCESTER'S HOSPITAL.

sance in England is very similar to the corresponding period in France for the examples consist almost entirely of Gothic construction overlaid with Italian detail. Probably the finest illustration of this type of work is the magnificent rood screen in King's College Chapel in Cambridge. The building itself is in the late Gothic style throughout but the screen, which probably dates between 1532 and 1536, shows almost no trace of medieval detail.

During the last half of the 16th century, the Italian mode became more familiar to English builders. *Longleat* (Fig. 96), built between 1567 and 1580, is symmetrical in plan and the exterior

is decorated with superposed classic pilasters that conform to academic principles of proportion and detail. This may have been due in part at least to the presence of Italians among the workmen who constructed the building. The façade is crowned by a balustrade in the best Italian High Renaissance manner. In its present form, Longleat is one of the most Italianate of the Elizabethan country houses. Originally it may not have been so for apparently it was first built with gables extending from front to back. These were later replaced by the flat roof now on the building even though the gabled type was better adapted to the prevailing climatic conditions. The projecting bays give variety to



FIG. 96.—LONGLEAT.

what would otherwise be a rather monotonous design. The main entrance is preceded by a portico with a broken pediment and is approached by a broad flight of steps quite in the manner of the Italian 16th century style.

The Italianism of Longleat is the exception rather than the rule in English architecture of the late 16th century. For the most part, the predominant Renaissance influence on English building of that period comes from Flanders and Germany, owing to political relations with those countries whose styles were in turn based on the Italian Baroque. Holland House at Kensington, built between 1607 and 1611, is an example of such Flemish baroque influence on English building. The period of supremacy of this style co-incided with the reign of James I (1603-25) from which it is often called the Jacobean.

Up to this point in the history of English Renaissance architecture, the influence of Italian styles had been an indirect one save for the relatively few Italian workmen that had been imported. This is not true after 1620 when the work of Inigo Jones (1573-1652) establishes a direct connection with Italy. Jones' career as a producing architect began after a journey to Italy in 1613-4. In the course of his travels, he came in contact with many of the most prominent Italian architects, notably Maderna and Scamozzi, but an even more important influence than theirs in determining the character of his subsequent work was that of writings and buildings by Palladio. The effect of these influences was great, for when Jones returned to England and resumed practice, his buildings reveal almost none of the forms in current use there. Instead Italian ones appear, employed with little or no modification. In this respect, English Renaissance architecture during the 17th century differs very strikingly from that in France where even the most academic designs reveal a translation of Italian forms into effects which are specifically French.

The *Banqueting Hall of Whitehall Palace* in London (Fig. 97) was built between 1619 and 1622. Its design is more Italian than that of any contemporary building in Europe outside of Italy itself. The façade might have been designed by Palladio himself, so well had Jones grasped the principles laid down by the Italian master. It is in three parts, a rusticated basement, a lower Ionic story and a Corinthian one above. The doubled pilasters at the ends frame the façade and the center is given prominence by the use of engaged columns instead of pilasters. In the first story, the windows have alternate triangular and segmental pediments on brackets in the Italian manner (Fig. 70), replaced by flat lintels in the second. The heavy swags of foliage in the frieze also follow Italian 16th century precedent (Fig. 77) as well as the balustrade which crowns the entire façade (Fig. 83). Like the Italian models that inspired it, the Banqueting Hall is a study in pure form. The treatment of the columns with a broken-out entablature is an indication of this, the actual function being decorative rather than structural. Their purpose is to create a play of light and shade by which the otherwise monotonous wall surfaces are given variety.

The practice of close adherence to Italian principles of design which Jones introduced into English Renaissance architecture swept away nearly every vestige of a native style. This is demon-

involved the work of Christopher Wren (1632-1723). There was a considerable group of architects who followed Wren's example in the early years of the eighteenth century. The classical style of architecture was the dominant one, and it was by no means by accident that there was a revival of the classical style in the eighteenth century. The designs for the new churches were in the classical style, and the old churches were in the classical style. In the early years of the eighteenth century, the old churches were in the classical style, and the new churches were in the classical style. The designs for the new churches were in the classical style, and the old churches were in the classical style. The designs for the new churches were in the classical style, and the old churches were in the classical style.



FIG. 97. ST. PETER'S, THE PROTESTANT CHURCH, LONDON.

of the existing and from up-to-date plan for the total reconstruction of the city, which would have surpassed in magnitude even the rebuilding of Versailles had it been accomplished. Wren's project called for a total destruction of buildings centering around St. Paul's Cathedral with the ruins of smaller churches serving as building-blocks against its dome. This plan was not carried out as the opposition would have required more time than it was thought to be employed and the present disposition of the city of London was greatly improved by it at all.

Even Wren's original design for *St. Paul's Cathedral* (Fig. 98), the core of the entire plan, suffered many modifications in execution.

tion. Wren had wished to have a domed structure of the central type, that is with a radial rather than a horizontal base. This project was frustrated by a conservative clergy and the building constructed between 1675 and 1710 is the traditional Latin cross in plan with nave, transepts and choir. The dome remained the central feature, however, its size being such that both nave and



FIG. 98.—LONDON, SAINT PAUL'S CATHEDRAL.

side aisles are spanned by it. The design of the exterior follows very closely that of the unexecuted dome designed by Bramante for St. Peter's in Rome, the cupola being supported by a drum surrounded by a free-standing peristyle. The façade reveals a mingling of baroque and academic forms which is not unnatural in the work of a man whose background was Inigo Jones' style but who had been influenced by Bernini. The design of the twin towers was based on that of certain Roman baroque churches, such

as Sant' Agnese in the Piazza Navona, with corner colonnettes and entablatures set at angles to the plane of the façade. The portico has two superposed orders of coupled Corinthian columns used in a manner not unlike that of Perrault's Colonnade of the Louvre (Fig. 91) and producing an effect which is almost as dignified. The upper order is carried around the sides of the church as a series of pilasters applied to a wall masking a series of flying buttresses required to sustain the domes of the nave while permitting a clearstory. A similar concealment of structure for decorative ends is seen in the dome. Like that of the Cathedral in Florence and Saint Peter's in Rome, it is in two shells. The inner one is much lower than that outside and actually supports it by an intermediate frame-work of brick and timber. The subordination of structural integrity to abstract decorative effect which this implies is characteristic of Renaissance design, and in the case of St. Paul's, involved a considerable sacrifice of stability.

Important factors in Wren's project for the rebuilding of London were the smaller churches intended to serve as minor accents against the major one of the Cathedral. They are comparatively simple in plan, the interiors being little more than rectangular boxes covered by shallow vaults, with the exteriors marked by a spire over the main entrance. The designs and proportions reveal Wren's familiarity with the academic tradition and his excellent taste in employing its forms. These small churches by Wren were the models upon which many of the oldest churches in the American colonies were based, notably Old North in Boston and St. Michael's in Charleston.

English architecture of the 16th and 17th centuries is not that country's most important contribution to western civilization. The Anglo-Saxon temperament was one which expressed itself by preference in writing and English literature of the period under consideration was much more significant than architecture. Furthermore, in the visual arts, the English at their best never revealed the feeling for mass and form essential to the most impressive architectural effects. In the English Gothic style, picturesqueness appears in place of the powerful integration of form and space in French Gothic. Without the tradition of form possessed by the Latin races, the English were able to make effective use of Renaissance elements of design only in those works which most closely approximate Italian originals, such as Jones' Ban-

queting Hall. Otherwise the results seem even more academic than do those attained by contemporary architects in France who invariably modified originally Italian ideas into something characteristically French.

A further point of contrast between English and French Renaissance architecture is the relative failure of the former to attain general popularity. Even in the middle of the 17th century, there was a lively interest in medieval architecture in England and Wren himself is known to have designed in the Gothic manner. This interest was particularly strong in the middle classes who continued to build their picturesque stone and wooden houses while the landed gentry were erecting Palladian villas. The value placed on tradition in England is amply testified by this, no less than by the short shrift given Charles I when his attempt to establish a political absolutism in England comparable to that of Louis XIV in France came to an end on the scaffold in 1649. A parallel instance in architecture is the rejection of Wren's plan for the reconstruction of London after the fire of 1666. In all of these cases, the English were upholding the tradition of local self-determination which was in itself a medieval institution. In so doing, England ranked herself with Holland in maintaining the significance of political forms that were the result of growth by accretion and myriad adjustments to popular needs rather than arbitrary creations conforming to a reasoned and symmetrical plan.

CHAPTER XII

EUROPEAN ARCHITECTURE FROM 1700 TO 1870

IN THE opening years of the 18th century, the academic point of view was the prevailing one, architecturally speaking, in almost the whole of Europe. Even in Italy where the Baroque had achieved such magnificent results in the 17th century, the academic style based on the writings of the Italian theorists, foremost among whom was Palladio, was acquiring greater prestige. The immense authority gained by the academic style in France was chiefly responsible for its wide imitation, just as the prestige of the French 13th century style had carried its influence far beyond the geographical limits of the country. In both France and England, 18th century architecture shows an increasing tendency to conform to the theories of Vignola and Palladio which in turn were derived from the writings of Vitruvius.

A typical English example is *Blenheim Palace* (Fig. 99), designed by Sir John Vanbrugh (1666-1726). It was finished about 1724. Vanbrugh is an interesting example of the amateur architect then beginning to appear in England. As a writer of comedies, he had achieved brilliant success before taking up architecture. His work as an architect reveals a mixture of academic and baroque elements. The latter dominate in the picturesque skyline of the forecourt at Blenheim, created by the contrasted masses of the structure. Baroque also was Vanbrugh's mania for great size which won for him the doubtful distinction of mention in one of Pope's dry epigrams. By contrast with these features of Blenheim, the giant order of the main entrance, the Doric columns above a basement for the flanking colonnades and the balustrade of the central block are in the best academic manner. The plan is strictly symmetrical and represents a development from the English medieval country house similar to that which has been observed in French architecture.

In France, the academic tendencies of early 18th century architecture are apparent in the design for the *Place de la Concorde* in

Paris (Fig. 100) by Ange Jacques Gabriel (1698-1782). It was begun in 1753 and finished by 1770. Known originally as the Place Louis XV, it is an example of the monumental city planning projects that were characteristic of the period. It lies on the main axis of the Louvre leading to the Champs Élysées, the ensemble being one of the most effective of its kind in existence. The design of the two buildings on the north side was inspired by Perrault's Colonnade on the east front of the Louvre (Fig. 91). The



FIG. 99. BLENHEIM PALACE.

façades consist of long Corinthian colonnades resting on a rusticated arcaded basement with pediments over the slightly projecting end blocks. The designs are completed by balustrades masking the flat roofs in the approved academic manner.

About the middle of the 18th century, a change occurred in the general character of European architecture. The hitherto prevailing academic style no longer held undisputed sway. The architectural changes reflect modifications that were then taking place in the structure of European thought, modifications that were no less significant than those by which the Individual had freed himself from the burden of outmoded medievalism in the 15th cen-

ture. In fact, they might rightly be considered as an expansion of Renaissance ideas into hitherto unventured fields. In the 15th century, the right of free inquiry in art and letters had been claimed; the Reformation had affirmed the same right in religion. In the mid-18th century, it was proposed to apply the principle of



FIG. 100.—PARIS. PLACE DE LA CONCORDE.

free thought to history, politics and science. The results of this were three-fold. In response to the awakened interest in the past, an historical point of view in the exact sense of the term was developed. The effect of political freedom of thought is seen in France and America in the revolts against established political institutions. The results of freedom of thought in science did not appear as soon as in either history or politics but to it was due the tremendous growth of interest in natural science in the 19th

century. In other words, the genesis of the more specific aspects of modern philosophy was in the spiritual turmoil of the later 18th century.

All three of the tendencies in 18th century thought have had an effect upon art, probably the most definite being that of the historical point of view. The nature of this 18th century historical point of view deserves some discussion. The spirit that animated it was essentially analytical and scientific, manifesting itself in a searching scrutiny of the facts of the past. The result was an extensive and often accurate knowledge of the outstanding periods and events in history but one which was almost entirely objective. Rarely if ever were the intellectual and social forces taken into consideration that had entered into the formation or destruction of the past civilizations whose superficial characteristics were so carefully observed. The effects of those forces were observed in detail; the forces themselves were hardly recognized to have existed.

One aspect of this historical point of view developed in the 18th century is revealed in the nature of the interest in art of the past which appears then. In architecture, the first style to come under observation was that of classic antiquity. It was natural that this should be so for the classic tradition was firmly entrenched by that time in one form or another. But hitherto, first-hand knowledge of classic buildings had been very limited. The source of information for the academic designers had not been the existing remains of classic architecture but books written by men like Palladio and Vignola. The ostensible ideal of the academists was the classic; in practice, they varied greatly from the originals. About 1750, various elements conspired to change this state of affairs. Probably the outstanding influence was that resulting from publication of the discoveries of Greek art made by a number of expeditions to Greece and southern Italy and illustrated volumes dealing with previously unknown phases of Roman art revealed by the excavations at Herculaneum and Pompeii. To eyes surfeited by the often pompous and extravagant forms affected by the academists, the clarity and logic of Greek architecture and the graceful delicacy of the informal Pompeian styles came as a welcome relief. Furthermore, the spirit of the time was a critical one of revolt against artificial and synthetic formulas, embodied in the architectural reaction toward greater simplicity

and more straightforward, logical structure. The investigations of Stuart and Revett, Major and the Adam Brothers, to mention only a few, revealed this aspect of classic architecture which the academic students of Vitruvius had failed to emphasize. As a consequence of these conditions, although the classic mode of thought which had been thoroughly ingrained in the European mind continued through the 18th century, the forms of its expression differ from the earlier academic ones. Many details are



FIG. 101.—PARIS. THE PANTHÉON.

actual copies from the buildings that had been newly discovered instead of the approximations which appear in the designs of the academists.

An example of the more scrupulous use of classic forms in the 18th century appears in the church of Sainte Geneviève or the *Panthéon* in Paris (Fig. 101) by Jacques Germain Soufflot (1709-80) which was built between 1764 and 1790. In designing it, Soufflot set himself to imitate the portico and the dome of the Roman Pantheon (Fig. 23), an intention which he obviously did not realize. So great was the power of the Academy that literal imi-

tation of antique prototypes was impossible to say nothing of the fundamental inadaptability of those prototypes to modern requirements. The dome resembles that of St. Paul's in London (Fig. 98) more than the Roman one. Like the English example, it is in two shells, the inner one supporting the outer by an intermediate structure. A further point of resemblance with the London example is the peristyle around the drum. The portico follows that of the Roman Pantheon in its general form consisting of a porch with free-standing Corinthian columns and a pediment. The effect is different, however, for the pitch of the gable in the original was retained making it impossible to have the porch equal in width to the front of the building, for in that case the peak of the gable would have been so high as to obscure the dome. To give necessary width to the porch, supplementary columns were added beyond the ends of the central colonnade to which they have no apparent relation. Similarly, the dome lacks unity in that it fails completely to give the impression of being the logical culmination of the base formed by the nave and transepts. The details of the portico reveal the archeological exactness that was Soufflot's ideal. In trying to obtain a generally classic effect, he suppressed all openings in the side walls of the nave, mistaking mere simplicity for classic restraint. The result is a quite unjustifiable denial of structural fact for the stories and openings of the interior elevation are not expressed in the exterior design.

Although Soufflot fell far short of the literal imitation of a classic model for which he strove, his attempt indicates the taste of the period whose ideal was more fully realized in the church of the Madeleine in Paris. It stands at the head of the Rue Royale leading northward from the Place de la Concorde (Fig. 100) and is in the form of a classic temple with a free-standing Corinthian peristyle. It was begun in 1806 to satisfy Napoleon's desire for a Temple of Glory that should be "a monument such as could be found in Athens." It is Greek only in the exterior design, if at all, for the "cella" is covered by domes. Unqualified worship of the classic is also evident in the design by Karl Gottfried Langhans (1733-1808) for the *Brandenburg Gate* in Berlin (Fig. 102) based on the monumental Propylæa, the gateway to the Acropolis of Athens. The order is more Roman than Greek, which is not surprising in view of its construction at a comparatively early date in the Classic Revival between 1788 and 1791. The climax of

this revival in Germany is reached in the so-called Walhalla at Regensburg, built about the middle of the 19th century, which reproduces the form of the Parthenon.

In England, the Classic Revival which received its initial stimulus from the publications of Stuart and Revett, Major and others attained widespread popularity in the work of the Adam Brothers. Their plans were in strict conformity with the Palladian formulas, but the elevations of their structures, particularly the interiors, were clothed in the purest Roman detail. The light and graceful style with which their name is generally associated was based



FIG. 102.—BERLIN. THE BRANDENBURG GATE.

on Pompeian prototypes. A more extensive use of classic forms, extending to the plan as well as in details, appears in *Saint George's Music Hall* in Liverpool (Fig. 103), designed by H. L. Elmes (1814-47) in 1839. The interior is based on the main room of the Baths of Caracalla in Rome while the outside is decorated with Corinthian columns which form a portico at the end and free-standing colonnades along the sides. St. George's Hall typifies the mid-19th century reaction against the earlier too-scrupulous use of classic forms which had proved unadaptable to modern usage. Exact reproductions of classic temples were more or less limited in Europe to commemorative or purely decorative structures whose functions were not exacting.

Contemporary with the Classic Revival and like it an architectural expression of the historical point of view developed in the 18th century, was the Gothic Revival. It was most popular in England and Germany where it was brought into existence by the growing consciousness of a Northern heritage quite as definite as the classic. With this consciousness came a realization of the cultural significance of medieval art. Thus although such men as Horace Walpole in England and Goethe in Germany had no intelligent understanding of Gothic architecture, they felt its expressiveness and saw in its forms an outlet for the feeling of

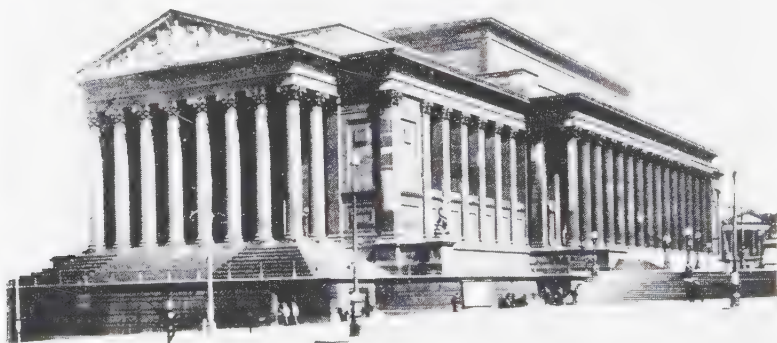


FIG. 103.—LIVERPOOL. SAINT GEORGE'S HALL.

their own age. At the same time that this sense of a Northern heritage was developing, a sentimental interest in Nature was making its appearance in the writings of Richardson and Gray in England and of Jean Jacques Rousseau in France. The picturesqueness of the organic Gothic forms soon led them to be identified with this nature cult whence they became the symbol of all that the 18th and early 19th centuries felt to be truly Northern, romantic and natural in art, religion or political thought. It is for this reason that the Romantic Movement in architecture is almost entirely confined to medieval forms, at least in its early phases.

The Romantic Movement was essentially a literary one and no exception to this need be made for its architecture. It is particularly true of the examples in the earliest period whose qualities are summed up in the works of Horace Walpole. His *Castle of Otranto; A Gothic Tale* appeared in 1764 at the same time that he was engaged in remodelling his villa "Strawberry Hill" along Gothic lines. The Gothic qualities of both book and building are quite superficial, introduced for the sake of emotional suggestiveness. The underlying fallacy of the attitude this embodies, that architectural style can be evaluated in terms other than architectural, is one that could have been justified only by the literary and sentimental age that produced it.

It was inevitable that the Gothic Revival should have played a part in the religious upheavals in 19th century England. One result of the associations formed in consequence of this is the feeling even now current that the only style of architecture suitable for religious structures is the Gothic, or the Romanesque at the very least. In a more profound sense, this feeling animates the writings of John Ruskin who saw the solution of all the economic problems of 19th century England in a return to medieval forms and methods of creation for the sake of the resultant moral regeneration. This idea, a literary one at best, acquired great prestige by virtue of Ruskin's persuasive prose and was largely responsible for the widespread popularity of the Victorian Gothic style in England and the United States during the latter part of the 19th century.

Ruskin's advocacy of the emancipation of the artisan from the stultifying influences of modern industrial methods was a typically Romantic concept. It was based, probably indirectly, upon the success of Sir Charles Barry's (1795-1860) design for the *Houses of Parliament* in London (Fig. 104). As the symbol of a tradition that was essentially Northern and essentially English, the Houses of Parliament achieved almost instant popular acclaim. In their own right, they are not without quality, due largely to Barry's collaborator, Augustus Welby Pugin (1813-52). Pugin realized the close connection between construction and design in the Gothic cathedrals of the Middle Ages as well as the necessity for well-trained workmen to execute the various decorative details. Thus the ornament of the Houses of Parliament consists of correct reproductions of medieval work which are

none the less quite uninspired. A certain picturesqueness resulting from the site of the building and its adaptation to the remaining portions of a previously existing one that had been damaged by fire is also vaguely medieval in effect. The adoption of a Gothic style for the Houses of Parliament marked the beginning of the period of greatest popularity of the Gothic Revival in England between 1840 and 1860.

Both the Classic and Gothic Revivals were direct results of the interest awakened in the 18th century in the historical past.



FIG. 104.—LONDON. THE HOUSE OF PARLIAMENT.

It was inevitable, once the idea had occurred of drawing upon historical styles, that others than the classic and the Gothic should also be revived. The result of this expansion of the idea was the Eclectic Movement in 19th century architecture. Its guiding principle was complete freedom to choose from all the historical styles, the only criteria being the taste of the architect and the supposed appropriateness of a given style to a particular type of building. Thus even more than in the Renaissance was architectural design a problem in pure form during the Eclectic period.

In France where the dominance of the Academy and the later École des Beaux Arts had exalted classic methods, Eclecticism

took the form of a Renaissance revival, particularly in secular buildings, although other styles were not without influence as well. The *Bibliothèque Sainte-Geneviève* in Paris (Fig. 105), erected between 1843 and 1850, was designed by Théodore Labrouste (1799-1875). The façade is unmistakably based on the Early Renaissance Italian palace type but in the decorative details such as the mouldings and swags of foliage, there is a delicacy of profile essentially Greek. This was undoubtedly the result of Labrouste's

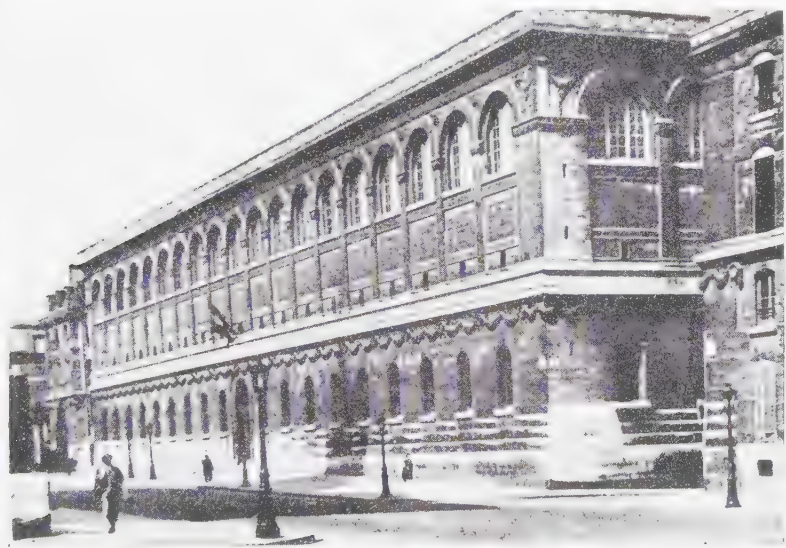


FIG. 105.—PARIS. THE BIBLIOTHÈQUE SAINTE-GENEVIÈVE.

study of the temples at Pæstum where he had worked during his pensionate at the French Academy in Rome. The principle of free choice among the historical styles thus affirmed, of taking details that are different in origin and combining them to form a new and personal idiom, is typical of the Eclectic Movement.

Other monuments of the late 19th century in France reveal the varied aspects of its architecture. Religious structures were usually in one of the medieval styles, harking back to the time when the Church was at the height of its power. The interest in medieval architecture apparent in 19th century France was due

in great part to Viollet-le-Duc whose writings and restorations of medieval buildings made him as powerful a propagandist for the architecture of the Middle Ages in France as Ruskin in England and America. Romanesque forms were used almost as freely as Gothic, the most striking example being the enormous marble church of Sacré-Cœur at Montmartre in Paris whose lofty domes are an insistent accent in nearly every vista of the city. The *Opera House* in Paris (Fig. 106) by Charles Garnier (1825-98) has exercised a powerful influence on theatre design since its completion

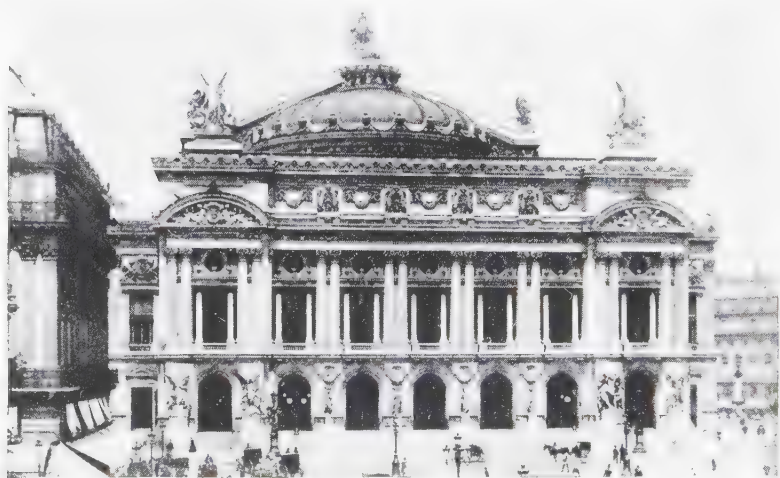


FIG. 106.—PARIS. THE OPERA.

in 1874. This has been due in part to its prestige as the seat of the French National Academy of Music and in part to the apparent appropriateness of baroque architectural forms to opera, the most baroque of all the arts. In designing it, Garnier followed late Venetian Renaissance models although the applied order of doubled pilasters with projecting pedimented end bays over an arcaded basement reverts directly to the French academic formula established by Perrault (Fig. 91) and continued by Gabriel (Fig. 100).

The "Battle of the Styles" that resulted from Eclecticism as a guiding principle of design is eloquent testimony of the unstable conditions that prevailed during the 19th century. Architecturally

it meant the complete divorce of form and function. The interior of a building need not necessarily have any relationship to the exterior, for the latter was only a decorative sheath which could be modified at will. Labrouste's Bibliothèque Sainte-Geneviève (Fig. 105) is an excellent example of this. The Tuscan masses of the exterior, enlivened by Neo-Greek mouldings, give no inkling of the slender cast-iron columns supporting vaults of riveted metal plates and glass over the reading-room within. In this latter detail, the building is notable as an early example of the extensive use of metal as a constructive medium.

The eclecticism of 19th century European architecture was the immediate consequence of the 18th century revivals which pointed the way to an extensive employment of historical styles in modern design. Its general background made it impossible that this eclecticism should be anything but a superficial copying of the forms of those styles, for the historical interest that gave rise to it was itself based on nothing more than mere observation of appearances. It follows that the forms employed by the eclectic designers could never have more than a superficial resemblance to those which they were intended to reproduce. The 19th or 20th century architect building a cathedral in the Gothic manner must perforce do it as a copy-book exercise since with the best intention in the world he cannot re-capture the spirit of the 13th century that found expression in the forms he so painstakingly imitates. The Eclectic Movement, in spite of the fact that it was a direct outcome of the Romantic protest against the Academies, is primary evidence of that separation of art from its life-source in environment which the Academies had brought about. Nothing could be more academic than the idea that vital art can result from the expression of ideas in forms created by other ages. In this fact lies the reason for the sterility of Eclecticism as a guiding principle and an explanation of the unmitigated dullness of the greater part of European architecture produced during the 18th and 19th centuries.

CHAPTER XIII

AMERICAN ARCHITECTURE FROM ITS ORIGINS TO 1870

ARCHITECTURE in North America during the period in which that continent was colonized was based on the styles of the countries in which the settlers originated. The houses and churches of colonial New England differ in no important respect from middle-class structures in England during the 17th and 18th centuries. In New York, Dutch types appear. The polyglot colonies in Pennsylvania and Delaware produced a mixture of Welsh, German and Swedish styles. To Florida, Mexico and California, the Jesuit missionaries carried the Baroque of Italy and Spain though unavoidably modified by the conditions under which the buildings were erected. The dependence of the settlers upon the styles of their mother countries is obvious in descriptions of the very first shelters they erected which have long since vanished. Captain John Smith wrote of the huts built by the first colonists in Virginia in terms indicating them to have been very similar to the rude shacks of the poorest laboring classes in England. By the end of the 17th century, more extensive settlement and greater security from attack gave the inhabitants of the New World more time to devote to architectural problems. Houses of some pretension and well adapted to their surroundings began to appear, and even though many of them were built of wood, so solidly were they constructed that a considerable number are still preserved.

Such was the *John Whipple House* at Ipswich, Mass. (Fig. 107), erected some time before 1669. It is very simple in plan, consisting of two rooms on each floor which occupy the entire width of the building. They are separated by a hall containing the main entrance and a staircase leading to the second floor. The house is of the wooden frame type which the English settlers in Massachusetts had known in their native land. Great corner posts support a rectangular framework of smaller beams on which the floors rest. The walls are a mixture of clay and straw filling the spaces between the wooden members of the frame

and stiffened by studs or angle beams connecting the vertical posts and the horizontal joists. This is exactly the same type of construction employed in English medieval half-timbered houses (Fig. 95) from which the American type differs only in its exterior sheath of clapboards which are overlapping pieces of wood. Clapboards were required in the severe New England climate where the unmodified English half-timber construction had proven in-



FIG. 107.—IPSWICH, THE JOHN WHIPPLE HOUSE.

sufficient to protect the inhabitants from the cold. If they were to be removed from the Whipple House, it would look like its English prototypes.

Protection from the bitter New England winters was the reason for many of the details of construction in such a building as the Whipple House. The brick chimney rises through the center of the structure in order that the heat radiating from it might be retained inside. The central location of the chimney also made it possible to have one stack for all the fireplaces of which there are four, one in each room. As the chimney is the most prominent feature of the exterior, so the fireplaces are focal

points in the design of each room in the interior. The rooms are generally quite plain, the structural beams and posts being exposed to view, although the main room of the lower floor sometimes had plastered walls.

Frank revelation of structural facts and an almost total disregard for abstract formal beauty are the outstanding qualities of the first or Colonial style of American architecture. A possible exception is the overhang, the slight projection of the attic over the second story which in turn projects over the first one. But even the overhang is a structural reminiscence, for in English tradesmen's houses it protected wares exposed for sale from the rain. Since the New England settlers were largely recruited from the middle classes, this type of building was the one with which they were familiar and which they reproduced. Although the need that gave rise to the overhang did not exist in the Massachusetts wilderness, it remained as a decorative feature just as the guttæ and triglyphs of the Greek Doric order persisted as ornamental details without their original structural significance. The ends of the overhang were sometimes carved as they are in the Whipple House, usually the only conscious attempt to relieve the unpretentiousness of the exterior.

It is hardly necessary to point out that the Colonial builder was not concerned with matters of formal design affecting the appearance of his structures. His main consideration was a practical and efficient arrangement of the interior for living purposes. If, as frequently happened, the house became too small for a growing family, it was enlarged by a lean-to added to the rear whose roof line usually continued that of the main part of the structure. Such is the case in the Whipple House which has a lean-to somewhat differently constructed from the main block although the clapboards conceal the joint between the two different parts. The resultant lack of symmetry in the ends was no more a disadvantage in the eyes of the builder than the non-symmetrical arrangement of the windows which were placed according to interior requirements rather than for their exterior effect.

It is for such reasons that the architecture of the Colonial period from 1620 to 1720 is often referred to as the medieval style in America. Like European medieval architecture, its character was determined by the constructive principles it embodied. The paral-

lel goes even farther, for Colonial architecture is essentially organic in nature and distinguished by striking appropriateness to its setting and the conditions under which it was developed. In New England, the Colonial style is a wooden one since the inevitable preliminary to settlement was the clearing of the forests which made for a large supply of lumber. In New York and Pennsylvania, stone was easily obtained; the Colonial houses there are consequently of that material and very different in character from the New England buildings. In the South, brick was commonly used and the less rigorous climate made possible a more open type than would have been possible in the North. A specific point of difference between the Northern and Southern types is the placing of the chimneys at the ends of the house in the latter since it was not so essential to conserve the radiated heat. Another contrast between the Northern and Southern Colonial houses arose from the differing antecedents of the settlers in the two regions. In the North, the colonists were of the middle class while the Southern settlers were usually of the aristocracy. Large numbers of servants were required to maintain the establishments and their housing was managed by outlying structures subordinate to the main one with which they might or might not be actually connected. Thus in all parts of the colonies indigenous styles were being developed, represented by buildings that were functional in character, comparatively unpretentious in appearance yet admirably adapted to their surroundings and the purposes for which they were intended.

By 1720, the unsettled political and social conditions of the Colonial period had become relatively stabilized. The Colonists were able to turn their attention to matters which their earlier struggles to keep soul and body together had forced them to disregard. A more involved social order made its appearance, based on that of England and marked by very sharp distinctions between class levels. In architecture, a style was developed which is much more pretentious than the Colonial. It is known as the Georgian and it was employed largely from 1720 to about 1790, a period contemporary with the first representatives of the House of Hanover on the English throne from whom the name of the style and period is derived. In general, the Georgian style in the colonies corresponds to that of the Renaissance in Europe, just as

the Colonial style is essentially a medieval one. The points of contrast between the two reveal a growing preoccupation with problems of formal design similar to that which is evident in European Renaissance styles. The plan of the Georgian house is on a larger scale than the Colonial one. Usually there are four rooms on each floor, that is, the house is two rooms deep. The hall with its staircase is more prominent than in the earlier style and is more ornate in character. Methods of construction in the Georgian period were much the same as in the Colonial and also the regional variations



(Courtesy the Essex Institute)

FIG. 108.—CAMBRIDGE. THE LONGFELLOW HOUSE.

in materials employed. The greatest contrast between the two styles is in the appearance of the buildings.

The majority of Georgian house designs originated in the textbooks of architecture which were being written in ever-increasing numbers by English architects during the early years of the 18th century. At that time, English architecture was essentially classic and academic, and the theories elaborated in writings by such men as Colin Campbell, James Gibbs and Batty Langley were ultimately based on those of Palladio. Numerous books written by these men were brought to the colonies. In the hands of journey-men masons and carpenters, they gave rise to a flowering of classic details upon the buildings of the New World altogether

comparable in spirit to that which occurred in 15th century Italy even though differing from it in the forms employed.

The academic quality of Georgian architecture is evident in the façade of the *Craigie* or *Longfellow House* in Cambridge, Mass. (Fig. 108) which was built about 1759. Details which reveal it are the giant order of Ionic pilasters on bases, the continuous frieze of dentils and the central pediment with horizontal and raking cornices both decorated with mouldings that follow closely the



(Courtesy the Metropolitan Museum)

FIG. 109.—METROPOLITAN MUSEUM, N. Y. ROOM FROM THE CHARLES STEADMAN OR POWEL HOUSE, PHILADELPHIA.

rules of academic design. The symmetry of the façade and the balustrade of the flat walk surmounting the hipped roof are other academic features. The hipped roof rises from all four sides of the house in an attempt to achieve a compromise between the flat roof dictated by academic formulas and the pointed one required by the rain and snow of a New England winter. That the builder of the house had no real understanding of the classic style is evident in his treatment of the Ionic pilasters. The base is

not continuous as in Roman and Renaissance examples (Figs. 20, 77) but appears only under the pilasters themselves. Similarly, above each pilaster is a small fragment of an entablature in addition to the complete one that circles the house. The architect was led into both these errors because he was copying a diagram of the order that consisted of a single column with partial base and entablature, the true functions of which he did not recognize.

The Georgian interior is no less academic than the exterior. A typical one is that from the *Charles Steadman* or *Powel House* in Philadelphia (Fig. 109) which was built about 1768. It is now in the American wing of the Metropolitan Museum in New York. The bareness of the Colonial interior with its exposed ceiling beams and undecorated walls has given way to an effect of great ostentation. The fireplace wall is panelled in wood with an elaborate mantel and over-mantel crowned by a typically academic broken pediment. The other walls are decorated with elaborately painted paper on which pagodas, trees, birds and mountains are represented. This type of wall paper was very popular in the Colonies during the third quarter of the 18th century when much of it was imported from China. Around the top of the walls is a classic moulding of the meander pattern while the plaster ceiling is decorated with a delicate foliate design. The Chippendale furniture is of the same period as the architecture and completes a design the equal in dignity and formality of anything contemporary with it in Europe.

In the South, different climatic conditions produced a type of house different from that in the North but no less academic in quality. *Mount Vernon* (Fig. 110) is typical of the southern Georgian style. It was given its present form by George Washington between 1758 and 1788, in several reconstructions of a previously existing building. The fact that he was his own architect is evidence that some architectural knowledge was then an indispensable adjunct to a gentleman's education. The square panelled columns of the portico are a variation of the usual round type. The balustrade of the portico roof had academic precedent although it is of the lighter variety made popular by Chippendale. Particularly southern qualities are the open portico and the outlying servants' quarters which are joined to the main building by arcaded passageways. The academic influence is seen in the Palladian window in the end of the house. The heavy pine boards of

the sheathing are cut and painted to resemble jointed blocks of stone. This quite unjustifiable method of attempting to give a wooden structure the more monumental effect of stone was frequently employed in the Georgian period and furnishes an obvious point of contrast with the straightforward practices of the Colonial period.

At first glance, it may seem that there is not much in common between the Georgian houses in America and the English houses that have been considered. This is accounted for by the fact that the American houses were built by upper middle class owners



FIG. 110.—MOUNT VERNON.

whereas the English examples were the homes of nobility. A middle class Georgian house of the 18th century in England is very much like those in America. There is also a resemblance between the churches of both countries. *Christ Church* in Philadelphia (Fig. 111) was designed by an amateur architect, John Kearsley, and completed in 1755. It follows the type of church erected by Sir Christopher Wren in London for the smaller parishes. Its immediate prototype was St. Martin's-in-the-Fields in London but there are many points of difference between the two in the details. Various classic motives appear in the tower which is well designed to achieve a transition from the square base to the octagonal spire. The superposed orders of the side walls express the two-part elevation of the interior. The white sashes and divisions

in the windows form an effective decorative contrast with the red brick walls which are given variety in themselves by slightly contrasting tones in adjacent courses. The balustrade with its urns is possibly too heavy in proportion to the rest of the building and the lack of agreement between the frieze of the side and that of the end wall reveals the hand of the amateur designer. The



FIG. 111.—PHILADELPHIA. CHRIST CHURCH.

Palladian window of the end wall is a masterpiece, however, in its admirable proportions, its relationship to the wall and the restrained decorative quality of the details. It is deserving of admiration in its own right as well as being historically interesting as the first appearance of the Palladian motive in American Georgian architecture. Christ Church is closely associated with the pre-Revolutionary history of Philadelphia by which it acquires an importance in addition to that of its excellent design. The latter

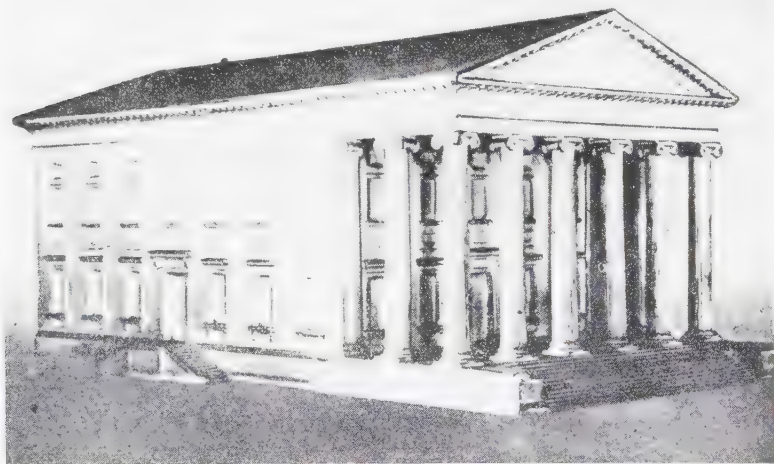
has led many critics to pronounce it the finest example of Georgian church architecture in the United States.

The period following the Georgian in American architecture is that of the Classic Revival from about 1790 until approximately 1840. As in the European Classic Revival, structures of this period in America reveal efforts on the part of their designers to reproduce as exactly as they could the monuments of classic antiquity. However, the American Classic Revival differed from its European counterpart in this characteristic respect; to the interest in the past already noted was added an even more powerful stimulus to the use of classic forms by the growing spirit of nationalism that developed in the post-Revolutionary period in the United States. This was evident in the need felt for an architectural style that would be particularly appropriate to America, owing nothing to any European country, particularly to England. A literary parallel is Webster's Dictionary which was an attempt to codify American as distinguished from English usage. At the same time, as compensation for the lack of background and tradition inevitable in a newly established country it seemed desirable that the style chosen as "American" should have something in common with those of the past. The one which seemed best to fulfill all these requirements was the classic.

Thomas Jefferson was the outstanding figure in the early Classic Revival in the United States. Today he is distinguished chiefly for his political accomplishments, but in his own time he was a leader in American architecture as well. His technical knowledge of architecture was equalled by his profound appreciation of its cultural value and philosophic implications. His approach to the problem of an American style was from the latter point of view, and it was that which finally led him to the conclusion that the forms of Roman architecture of the Republican period were those best fitted for adaptation to the buildings of the new republic in the West. It was therefore the similarity in theory of government that was Jefferson's justification for believing that Roman architectural forms were the most appropriate for use in America whether they were adaptable to its needs or not. Such was the fallacy which determined the architectural style of the young republic.

Jefferson was a practical as well as a theoretical architect, and he supported his thesis with actual designs. These he derived from

direct observation of Roman buildings instead of seeing them "as through a glass darkly" in the writings of Palladio and the other theorists. In part this was due to his nationalistic opposition to the English academists whose works had exercised such a powerful influence on the American Georgian style. Thus when Jefferson was asked to draw up plans for the Virginian State Capitol in Richmond, he designed a modified form of the *Maison Carrée* in Nîmes (Fig. 19). The latter was one of the first actual examples of Roman architecture which he saw during a visit to



(From Thomas Jefferson, *Architect*, by F. Kimball)

FIG. 112.—RICHMOND, VIRGINIA CAPITOL. ORIGINAL MODEL.

Europe from 1784 to 1789 and its effect on him can be gathered from his statement that he gazed "whole hours at the *Maison Carrée*, like a lover at his mistress." The model which he constructed as a part of his specifications for the *Virginia State Capitol* (Fig. 112) shows some variations from the original. One of these was the substitution of Ionic capitals for the original Corinthian to reduce the expense of carving. The problem of doors and windows was one whose solution also required some deviation from classic models. In solving it, Jefferson followed the practice of the French classicists. Still further changes were unavoidable when the building was in the process of erection but

for all this, it marked an epoch in architectural history. For one thing, it was the first building designed specifically to meet the needs of modern republican government, not only in this country but in the world. It was also the first time that the unmodified temple form was employed in a building that was intended for really practical use although it had been applied before to memorial and purely decorative structures. In this adaptation of exact classic



FIG. 113.—PHILADELPHIA. THE CUSTOM HOUSE.

forms to modern ends, the American Classic Revival anticipated that in Europe by many years.

As soon as the classic temple motive appeared in American architecture, enthusiasm for it swept all other forms aside. Jefferson himself employed it for many buildings, notably those of the University of Virginia in which he reproduced the Roman orders with great accuracy. In the professors' houses, the temple form was used for the first time in domestic structures. As the popularity of the style grew, Greek forms were employed as well as Roman. The *Philadelphia Custom House* (Fig. 113), originally the Bank of the United States, was designed by Benjamin Henry Latrobe (1766-1820) and built between 1819 and 1824. It re-

produces the general proportions and order of the Parthenon although considerations of space made it necessary to limit the colonnades to the ends. In the Bank of the United States, Latrobe gave expression to the ultra-classic principles which prevailed in American architecture in a form which won favor from many European commentators at the time. It antedates by at least ten years any foreign adaptation to modern needs of the Parthenon design, the



FIG. 114.—HAMILTON. THE SPENCER HOUSE.

employment of which in a commercial structure reflects a degree of classicism unparalleled in any other country.

The "Republican style," as it was currently known, soon spread over the entire United States. The geographical distinctions apparent in the Colonial and Georgian period were wiped away and the pure classic style prevailed from Maine to Georgia and from New York to Michigan. Buildings of all kinds were designed in the form of Greek and Roman temples. In houses, a classic portico was the touchstone of social position even in regions which were then the backwoods. The *Spencer House* in Hamilton, N. Y.

(Fig. 114) is an example of such a "temple," erected with its Doric porch some time after 1820. In all parts of the nation, the same phenomenon appears and classic porticos were the order of the day.

It hardly needs to be repeated that the style of the Classic Revival was an artificial one. The pioneers in Central New York and the wilds of Ohio and Michigan could not have been expected to express themselves naturally through the antique orders or to adapt the programs of their buildings to the restrictions of the temple form. Accordingly, the form itself was soon subjected to many changes. In the Spencer House, the Doric order is far from pure, with its crushed echinus and a base under the shaft. The doorway is set at one side to lead into the hall required by the severe winters, breaking the symmetry which is the chief classic characteristic. To gain additional interior space, a wing is added to one side of the main "temple," modifying even more the symmetry of the structure. Still further changes were made necessary in order that the upper rooms in the front of the house might have some natural illumination. A full entablature would cut off almost all the light from those rooms. Sometimes this was remedied by inserting open grills in the frieze, while in other cases, as here, the entablature is practically eliminated. In either case, the purity of the classic forms is destroyed. It is evident that the function of the classic temple house is actually hampered by its form instead of determining it. Attempts to arrive at a satisfactory compromise between them were never successful. It is patent that one basic form could not serve for private homes, banks, churches and state-houses. The classic builders themselves did not expect that the temple form could be used for every type of structure. The Classic Revival attempts to use it for all kinds of buildings only emphasize the impossibility of achieving effective results when exterior appearance is held to be the most important factor in architectural design.

With all the unfavorable characteristics of the Classic Revival style in mind, it cannot be denied that it contributed a much-needed element of dignity to American architecture. The best effects of the Georgian style are those of skillfully executed detail. In the hands of workmen possessing little taste or ability, it was often dry and monotonous. The Colonial style is that of a craftsman, attaining architectural effectiveness by sound construc-

tion and an unconscious feeling for good proportions on the part of the builders. The buildings of the Classic Revival, on the other hand, possess an intrinsic solidity, sometimes in spite of the inexperienced designers. A few well-turned Doric or Ionic columns lend distinction to many a house of the early 19th century which would otherwise be only mediocre in effect. Furthermore, the



(Copyright C. O. Buckingham, Washington, D. C.)

FIG. 115.—WASHINGTON, THE UNITED STATES CAPITOL.

style is an admirable indication of the growing sense of national importance which colored all American thought at that time.

The best-known example of the American Classic Revival is the *United States Capitol* in Washington, D. C. (Fig. 115). It is located on one of the focal points of a vast plan for the entire city, drawn up by Major Pierre Charles l'Enfant (1754-1825) after the model of Versailles. The plan of the original Capitol was by an amateur architect, Dr. William Thornton (1759-1828) of Philadelphia. As first constructed, a low central dome modelled after that of the Roman Pantheon rose from a base formed by

the chambers of the Senate and of the House of Representatives. Various subsequent alterations gave the building its present form, the final and most extensive by Thomas U. Walter (1804-88) in 1851. This involved the extension of the flanking wings by large blocks with pediments over the entrance fronts and free-standing colonnades along the side, and the construction of the present dome over the lower one by Thornton. It was completed in 1863 and is of cast-iron painted to resemble stone. Its design is somewhat like that of the dome of Saint Paul's in London (Fig. 98) with a free-standing peristyle around the drum. The cupola dominates the masses of the wings that serve as a base to produce an effect which is not without impressiveness, a result which does something to justify the structural dishonesty by which it is attained. The building, like the greater part of those in the academic tradition is quite dull, but this should not obscure its relative excellence in comparison with the majority of mid-19th century examples of American architecture. Its widespread influence is attested by the many state capitols that follow its general arrangement.

As in Europe, there was a Gothic Revival in American architecture of the 19th century. It was not without precedent in the American colonial period, for the Gothic style had been used before the Revolution in the first building erected on the present site of Trinity Church in New York. This slender connection with the Middle Ages was reinforced in the early 19th century by the romantic novels of Sir Walter Scott and Washington Irving, the latter having gone so far in his medievalism as to rebuild his home, "Sunnyside," in a pseudo-Gothic style after Walpole's example in England. From 1835 until about 1860, the Gothic style was as popular as the classic one had been a few years before, an example being the so-called "*Wedding-Cake*" House at Kennebunkport, Me. (Fig. 116) which was built about 1850. The Gothic details here are obviously superficial. Underneath the pinnacles, pointed arches and other decorative incrustations, the house is little more than a box. Upon its rectangular form, Gothic motives were festooned just as classic details would have been applied a hundred years earlier. The extensive use of medieval motives arose from the fact that they were fashionable although their popularity was also due to a profound if unformulated and unconscious desire for beauty on the part of those who employed them which led them

to seize upon anything to relieve the drab monotony of their structures. The ineptitude of the results can be attributed to lack of the background which imposed some restraint upon the use of revived historical forms in Europe. This fact too was unconsciously felt and the fumbling, almost pathetic attempts to acquire such background by arbitrarily creating its forms of expression without the capacity to understand them left its mark on Amer-



(Photo Walker Evans)

FIG. 116.—KENNEBUNKPORT. THE "WEDDING-CAKE" HOUSE.

ican architecture during the years immediately before the Civil War.

The closest approximations to medieval Gothic effects appear in examples of religious architecture in the American Gothic Revival. The use in churches of medieval forms as known to the 19th century did not require the fundamental alteration of their character that was involved when they were adapted to types with which they had never had any structural relationship. For this reason, such buildings as Trinity Church by R. M. Upjohn, Grace

Church and *St. Patrick's Cathedral* (Fig. 117) by James Renwick, all in New York, show less deviation from medieval models than do the Gothic houses that were being built at the same time. Without the possibility of immediate comparison with medieval originals, *St. Patrick's* (1850-79) seems very convincing. Its Gothic characteristics are only superficial, however, the nave vaults, for example, being of papier-maché painted to look like stone.



FIG. 117.—NEW YORK. SAINT PATRICK'S CATHEDRAL.

Throughout, the effects were planned to conform to a pre-conceived idea of appearance instead of being attained by the logical integration of structural details.

The tendency toward superficial stylistic effects in American architecture before the Civil War appears in an aggravated form after it. Three factors were chiefly instrumental in formulating the architectural style of the "Brown Decades" as the period from 1865 to about 1890 has been very aptly termed. The first of these was the class of people who were responsible for most of the

construction done, the *nouveau-riche* created by economic conditions during and after the War. They had little or no taste for the most part and their idea of architectural effectiveness was in terms of the greatest number of gew-gaws and knick-knacks that could be crowded on a building. The second factor in determining the architectural style of this period was the invention of the jig-saw and the discovery of easier methods of casting iron. Both of these mechanical methods were employed to turn out yards of wooden fretwork, thousands of spindles and tons of metal grills and screens for use as architectural decoration. Most of these were in the Gothic style, owing to the third factor that influenced architecture of the Brown Decades, the tremendous influence of John Ruskin and his fellow-literateurs who were preaching a return to medieval forms and ideals as a cure for the moral evils of an industrial world.

All three of these factors were important in the formation of the style popularly known as Victorian Gothic. Its chief characteristic is enormous pretentiousness whether the buildings are of wood or the brown stone so favored by the age. In either case, the buildings have very little genuine architectural quality as can be seen in the edifices along the streets of the American cities and towns that grew up during the Brown Decades (Fig. 118). To secure what was fondly believed to be a picturesque effect, the building masses were broken up into irregular and unrelated forms. An ill-digested eclecticism was responsible for the incrustation of these forms with a profusion of Gothic, Renaissance and baroque details. Throughout, the dominant consideration was that of expressing the social position of the owner by the only means that would achieve that end, namely, by outdoing every building around in the amount of decoration. The heavy walnut and black oak furniture which infested the gloomy interiors served to complete an effect of unrelieved drabness. All of these qualities appear in the buildings of the Centennial Exposition of 1876 in Philadelphia which have been appropriately termed the nadir of American architecture.

The uniformly low level of American architectural achievement during the post-Civil War period apparently held no promise for its future. It must not be forgotten, however, that the hopeless ineptitude that characterizes it was not due to a deliberate preference for the forms employed but to ignorance. Lack of background made

impossible any general appreciation of the beauty of past ages, a fact to which Mark Twain's remarks concerning the art he saw in Europe bear significant testimony. But even in the unfavorable atmosphere of *parvenu* taste and arrogant nationalism, the capacity to see beyond the insistent requirements of mere physical existence or the goal of financial affluence was present. To a few people, the exhibits sent by European countries to the Exposition of 1876



FIG. 118.—UTICA, VICTORIAN HOUSE.

came as a marvellous revelation. Their eyes once opened, they were able to recognize the talent of the first great American architect of modern times, Henry Hobson Richardson (1838-86). Richardson was one of the increasing number of Americans who had gone abroad for his artistic training. He had studied in the École des Beaux-Arts in Paris, but his genius had not suffered from the stultifying atmosphere created by the academic principles for which that school is noted. His first buildings in this country were in the current Victorian Gothic mode but the structure which brought him general recognition was not one of these. In *Trinity*

Church in Boston (Fig. 119), the first statement of Richardson's architectural creed is seen.

The style of Trinity Church is Romanesque of the 12th century. Richardson's motives in employing it were two-fold. A true romantic, he was attempting to find among historical styles the one that would best typify the ideals and temperament of the American nation. The second consideration was an entirely practical one. The site chosen for the building was of such a shape that a Victorian Gothic structure could not be erected on it. In



FIG. 119.—BOSTON. TRINITY CHURCH.

casting about for a suitable style, the Romanesque came to Richardson's attention and in the massive forms of Trinity Church, a new epoch in American architecture was born. The source of Richardson's inspiration for the great square tower and the bleak and craggy walls was Salamanca Cathedral in Spain. But the resemblance of the two buildings is only a general one for the form of Trinity Church was achieved in the medieval fashion by a process of organic growth. The effect of a given part was judged when it was in its place in the building and not by the academic correctness of its details in the architect's drawing. As a result,

the structure has an individuality and appropriateness to its setting which is characteristic of all Richardson's buildings. Furthermore, it was an individuality attained in architectural terms, not by extravagance and exaggeration as in the case of much building contemporary with it. The influence of Richardson's training combined with his own sense of architectural quality to produce a result which had the elements of distinction so strikingly absent from the previous buildings of the Brown Decades.

Now it may well be asked in what respect the Romanesque of Trinity Church is superior to the Gothic of St. Patrick's. The answer is best given by analogy. If a 19th century poet were to have fabricated a Latin poem by putting together a number of lines chosen *verbatim* from 13th and 14th century Latin verses, the result would be a literary parallel of the Gothic Revival typified by St. Patrick's. If, however, the poet were to master the vocabulary, grammar and idioms of 12th century Latin literature and use them in his own way to create a new and original poem, that process would be similar to Richardson's method of employing 12th century architectural idioms. To this, it might be rejoined that Richardson was no more justified in using architectural forms of the 12th century than Herman Melville would have been in writing *Moby Dick* in 12th century Latin. This carries the analogy too far, for the literary background of Melville's or Richardson's period was extensive while that of the visual arts was practically non-existent. Historical idioms were nearly all that were available to the 19th century architect at the same time that new and individual ones were being created in literature. Furthermore, it is the method that Richardson developed in using medieval forms that is significant rather than the forms themselves. His genius becomes the more apparent in the light of the deplorable results when men of lesser talent and originality attempted to copy his style.

Richardson himself was not restricted in any sense to Romanesque forms. This is quite apparent in the numerous buildings he designed with practically no use of Romanesque forms yet possessing the massive dignity of the style which appealed to him so greatly. Among them were a number of stations for the Boston and Albany Railroad. Such was one of his last and greatest buildings, the *Marshall Field Wholesale Building* in Chicago (Fig. 120), built in 1886. In designing it, Richardson was dealing with a

peculiarly modern architectural problem. His solution reveals the minute attention with which he considered the general artistic function of the building as well as the more specific mechanical one. In the heavy stone masses of the base and the piers, there is a sense of strength and permanence. The satisfactory proportions, the relationship of wall and window space and the termination of the design in the doubled windows of the top story are all



FIG. 120.—CHICAGO, THE MARSHALL FIELD WHOLESALE BUILDING.

evidence of the care taken by Richardson to achieve a design which would be beautiful in itself and at the same time completely expressive of the construction and purpose of the building. No more penetrating criticism of the Marshall Field Building has been written than that of Louis Sullivan who fell heir to Richardson's leadership in American architecture; "Four-square and brown it stands, in physical fact a monument to trade, to the organized commercial spirit, to the power and progress of the age, to the strength and resource of individuality and force of character; spiritually it stands as the index of a mind large enough to cope with

these things, taste them, absorb them and give them forth impressed with the stamp of a large and forceful personality; artistically it stands as the creation of one who knows well how to choose his words, who has somewhat to say and says it as the outpouring of a copious, direct, large and simple mind."

Objectively, Richardson's significance in American architecture lies in the fact that his work represents the return to a judgment of architecture by qualities other than mere picturesqueness. He realized, as did none of his immediate predecessors and very few of his successors, that great architecture does not result from copying or even adapting the forms of past styles. It is produced only when a profound understanding of the function of the building and its relationship in the broadest possible social sense to the period that produced it are given expression in a design which possesses in itself the qualities of symmetry and proportion that make for beauty. Richardson's realization of this is revealed by the wish he once expressed that he would sometime be able to design a grain elevator and the interior of a river steamboat, both characteristic products of his age. Thus in theory as in practice, Richardson stands for the principle that an architectural style can be produced only when a race or nation feels itself so strongly entrenched in its own traditions and so firmly established upon them that it can give expression to them with assurance and confidence. Richardson's death in 1886 at the age of forty-eight deprived America of its first modern architect at the moment when the influence of his example would have been the most significant. For it was about this time that iron and steel first came to be generally employed as mediums of construction.

ARCHITECTURE OF THE LATE 19TH AND EARLY 20TH CENTURIES

ONE of the outstanding characteristics of the late 19th and early 20th centuries is the prevailing interest in natural science. This interest was a logical development from the nature cult of the 18th century which gave such color to certain phases of the Romantic Movement, for the fascination which Nature in all its forms held for the earlier 19th century led inevitably to a scientific attitude towards it as the century progressed. This attitude is incorporated in the philosophy of Herbert Spencer in which the varied aspects of human existence are explained by objective, scientifically determined facts. It is reflected in the art of the period; painting was impressionistic, a scientific reconstruction of sunlight upon canvas; in architecture, it gave rise to the theory of functionalism.

The essence of functionalism is that architectural forms, like biological ones, should be determined by their purpose and environment. In the broadest sense, functionalism thus includes the expression of cultural and nationalistic ideas as well as the more immediate structural duties of the forms employed and the use to which the building is to be put. From this it follows that the historical styles should have little place in modern architecture save as they may indicate the importance of the historical viewpoint upon contemporary social and cultural forms. A style conforming to these requirements appears in an incipient form as early as 1825 in a series of designs by Karl Friedrich Schinkel (1781-1841) for buildings of a purely utilitarian nature, notably a lighthouse and a shop. These designs represent a rationalization of the currently used historical forms and contrast with contemporary work in their greater simplicity and clearer expression of structural and functional characteristics. But great as the importance of this rationalistic tendency was in determining the formation of late 19th century architectural style, an even more important factor was the increased use of iron as a medium of construction. This was made possible by the perfection of the Bessemer process

in 1855 and the Siemens open-hearth process in 1862. Before the development of those processes, iron had to be wrought by hand to be strong enough for structural uses; after them, iron in a highly refined form, or steel, was quite cheap and easily available.

Iron had been used extensively in buildings earlier in the 19th century, it is true. In 1811, an exposition hall in Paris had been built with a glass dome supported on iron beams. Labrouste had covered the reading room of the Bibliothèque Sainte-Geneviève with barrel vaults of glass and open-work iron girders, and had used domes constructed in the same way over the reading room of the Bibliothèque Nationale in Paris. On a larger scale, the same materials were used in the famous London Crystal Palace of 1851. In the United States, the cast-iron dome of the National Capitol in Washington (Fig. 115) is an early example of the use of iron in monumental construction. The extensive use of cast-iron for decorative details during the Victorian era has already been noted. In none of these cases can it be claimed, however, that iron was used with any realization of its inherent and proper structural and decorative characteristics. The dome of the United States Capitol was painted to look like stone; Labrouste's structural columns were cast in classic forms.

In striking contrast to the first architectural examples of the use of iron in construction, the engineering projects of the late 19th century in which iron and steel were employed often reveal a profound realization of their intrinsic qualities. This is particularly true of the great bridges which were being built at that time. John Roebling built the first cable suspension bridge at Pittsburgh in 1848. It was the forerunner of the famous *Brooklyn Bridge* (Fig. 121) built by his son Washington Roebling (1837-1926) between 1871 and 1883. In designing it, Roebling was concerned with nothing but the creation of an efficient structure. The roadway is supported by great steel cables hanging from the granite piers. The curves of the cables are planned to realize the utmost tensile strength of the steel, the factor upon which the stability of the bridge depends. Herein rests the beauty of the design. The form of the bridge resulted from solving the functional problem it presented as efficiently as possible. The only concession to contemporary "Gothic" ideals of architectural beauty was in the pointed arches of the piers. These are necessarily massive and the contrast of their heavy forms with the delicate tracery of the steel

web they support is an objective element in the beauty of the structure. The steel work itself is devoid of any ornament; nothing detracts from its logical and rational forms which exemplify the most important point of contrast between late 19th century engineering and the architecture contemporary with it.

In the straightforwardness of its design, the Brooklyn Bridge is superior to its later rival in steel construction, the *Eiffel Tower* in



FIG. 121.—BROOKLYN BRIDGE.

Paris (Fig. 122), built by Gustave Eiffel in 1889. It was erected for the Paris Exposition of that year and as is usually the case in exhibition architecture, it reflects the popular taste of the period, in the "artistic" treatment of the base. It is obvious that this decoration is applied and not organic. It obscures but does not completely blot out the vigorous lines of the great piers that form the base or the upward sweep of the tower above. In those parts of the structure, the unadorned and logical use of steel in a way that makes the most of its strength places the Eiffel Tower among the examples of great design in the 19th century.

It was the development of iron and steel as constructive materials that gave functional architecture of the late 19th century in America its most characteristic forms. Functionalism as such was not unknown earlier; it is admirably embodied in Richardson's designs. But Richardson's was essentially a style of stone and the use of steel involved different forms from his if the functional idea were to be carried out in a rational way. The great demand for commercial buildings in the United States, resulting from the expansion of business after the Civil War, provided a general stimulus to the development of a functional style involving the use of steel. More specific was the rebuilding of Chicago after the disastrous fire of 1871, one result of which was to make the mid-western metropolis the birthplace to all intents and purposes of functionalism in America. A feature of this rebuilding was the concentration of commercial buildings in one part of the city; a parallel development in New York resulted in the restriction of the financial district to the lower part of Manhattan. In both New York and Chicago, the effect of this concentration was seen in the high premium upon land in the preferred districts which made it essential that the buildings upon that land should have the maximum amount of rentable space. This led to making them higher and higher since lateral expansion was impossible on account of the very conditions that located them in the high-cost regions. In these peculiarly American



(Photo Levy et Neurdain)

FIG. 122.—PARIS. THE EIFFEL
TOWER.

circumstances, the idea of the skyscraper was born. The solution of the problems of skyscraper construction gave American architecture of the late 19th and early 20th centuries a character quite different from contemporary work in Europe where none of the conditions existed that called the skyscraper into being.

It was in connection with the skyscraper that steel played its first important rôle in architecture. Some of the first tall buildings were of masonry, but stone and brick could not be used as efficiently in that type of edifice as steel. The models illustrated (Fig. 123) will explain the reason for this. In a stone or brick building, illustrated to the right, the walls support their own weight as well as that of all the floors inside them. If the walls are made higher, they have to be thickened at the base for the increased weight of the walls themselves as they are carried upward places the lower part under greater compression and makes it tend to buckle outward. This thickening gives the walls a pyramidal section. When all of them are of masonry, as in most buildings up to and including those of Richardson, the amount of interior space on the higher-renting ground floors was very considerably reduced. This disadvantage was partially overcome by using vertical steel beams for the interior supports with masonry walls only for the outside ones as in the center model. This made a somewhat greater height possible but the drawbacks of the type employing masonry alone were still present to some extent.

The model to the left represents a building supported entirely by a steel framework. In such a building, the total area occupied is available for use from the ground floor to the top save for the negligible space taken up by the relatively slight supporting beams. These beams sustain the entire weight of the structure. Even the walls do not have to be self-supporting for they are hung from the steel skeleton; their supporting function has been given to the girders and they serve only as screens to cut off the exterior from the interior. The advantages of this method of construction in a commercial building are many. The height is practically unlimited. The area of the ground floor, the most desirable one for commercial purposes, is as great as that of the upper ones. The illumination of the interior is much facilitated since the entire space between the vertical supports can be opened out if it is so desired, whereas in a masonry building, the size of the

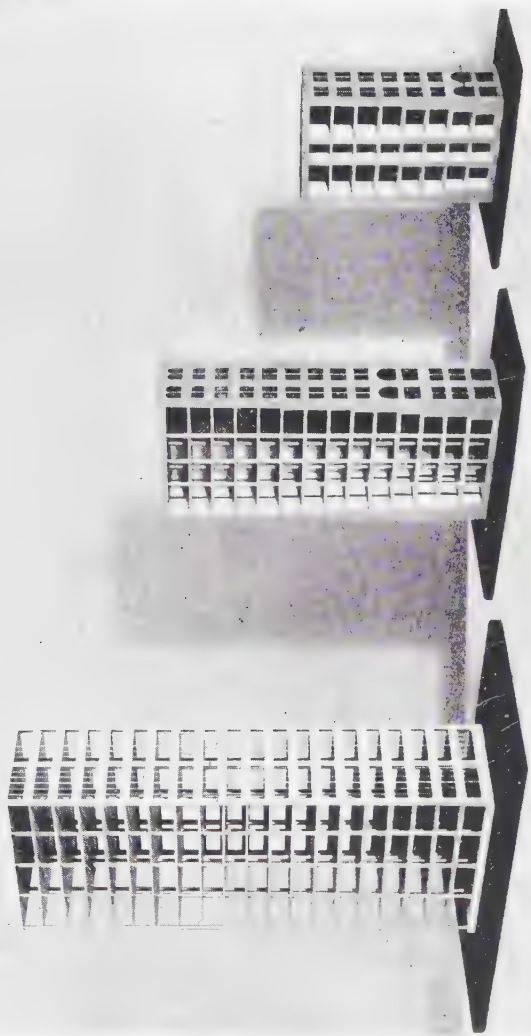


FIG. 123.—MODELS ILLUSTRATING MASONRY AND STEEL SKYSCRAPER CONSTRUCTION.

windows must depend upon the relative importance of the wall as a bearing member at a given place.

Steel was not used only in the structural beams of the skyscraper. In the form of long cables, it was employed in connection with the elevators so essential to the skyscraper. Obviously even a ten-story building would require some means of vertical locomotion other than that of human legs and flights of steps. The first commercial building with an elevator in the United States was built in 1874; from that time on, its development coincided with that of the skyscraper. Another problem of skyscraper construction that had to be solved was the protection of the metal skeleton from deterioration by the elements and destruction by fire. Such early skyscrapers as the Home Life Insurance Building in Chicago, built by William LeBaron Jenney in 1884, and the Tacoma Building of 1887 by Holabird and Roche, also in Chicago, had steel skeletons sheathed with masonry in forms reminiscent of Richardson's Romanesque. Later, terra-cotta and concrete were used for this purpose, the latter medium also being employed for floors when reinforced with steel beams. These and similar substances are the constructive elements of modern architecture.

New constructive principles and materials required a style appropriate to them. The importance of this factor in architectural design will be made clear by reference to some of the 19th century buildings already considered. The Marshall Field Building (Fig. 120) is obviously a stone building. Everything in the design points to that fact, proportions, wall and window membering, relation of solids to voids. The Brooklyn Bridge (Fig. 121), on the other hand, would be impossible in any medium other than one with the tensile strength of steel, for the outstanding element in its design is the great catenary curves of the cables. In each case, the design is functional as expressing the medium of construction. This is not true of a building like the Bibliothèque Sainte-Geneviève (Fig. 105) whose exterior gives no inkling of the iron and glass vaults of the interior. It stands to reason that the historical styles are fundamentally inappropriate to buildings of steel, for their forms are those of stone, wood, plaster or simple concrete, to distinguish the latter from modern ferro-concrete. This fact was apparently not realized by most of the architects of the period under discussion.

The name of one man stands out in the history of late 19th

century American architecture as an exception to the last statement in the foregoing paragraph. Louis Henry Sullivan (1856-1925) was the first American architect to undertake consciously the development of an architectural style based on modern methods and materials of construction. His aims are summed up in the phrase "Form follows Function." The principle thus embodied was the result of Sullivan's observation that the great styles of the past had been developed by giving expression to the purpose for which a building was intended, the constructive method involved and the material of which it was built. Sullivan thought to apply the same principle to the design of the modern tall, steel-framed office building. It was obvious that a prototype for such a building did not exist in the past. Its style had therefore to be developed according to a rule which would be in the words of Sullivan's teacher "so broad as to admit of no exceptions."

The first step toward a realization of Sullivan's ideal was the *Wainwright Building* in St. Louis (Fig. 124), built in 1891. As a modern building, it has no relationship to the past, either in function or in form, hence the suggestion of any historical style is carefully avoided. The stability of the structure is derived from its steel skeleton which is indicated by the protective terra-cotta sheath in strips so slender they are obviously incapable of supporting anything. The walls are reduced to mere panels underneath the windows; they bear no weight, for they are only screens separating interior and exterior. Their non-structural function is indicated by delicate ornament of a type individual to Sullivan and bearing no resemblance to that of any other architect or style. The terra-cotta piers not only serve the practical function of protecting the steel frame of the building but the visual one of supplying a vertical accent to the exterior by which the loftiness of the structure is accentuated. This is the embodiment of another element of Sullivan's architectural creed. Since the modern office building is necessarily tall, then everything in the design should further the impression of tallness. According to Sullivan, the basic idea of masonry construction, the superimposition of masses, is replaced in steel construction by the principle of vertical continuity in consequence of which the building becomes "a proud and soaring thing."

The application of Sullivan's formula was not limited to tall office buildings. In the *Schlesinger-Mayer Building* in Chicago, now

the store of Carson, Pirie, Scott & Co. (Fig. 125), he anticipated European methods of department store design by at least twenty



FIG. 124.—ST. LOUIS. THE WAINWRIGHT BUILDING.

years, the first unit of the Chicago structure having been built in 1899. Instead of the vertical design of the Wainwright Build-

ing, the Schlesinger-Mayer Building is horizontal in accent, an effect more in keeping with the function of a department store which requires large flat areas rather than the cubical volumes of an office building. The wide windows separated by narrow terra-cotta strips are admirably expressive of the open steel framework and also directly contributory to the efficiency of the building. Only in the lower stories is the clean-cut simplicity of the de-

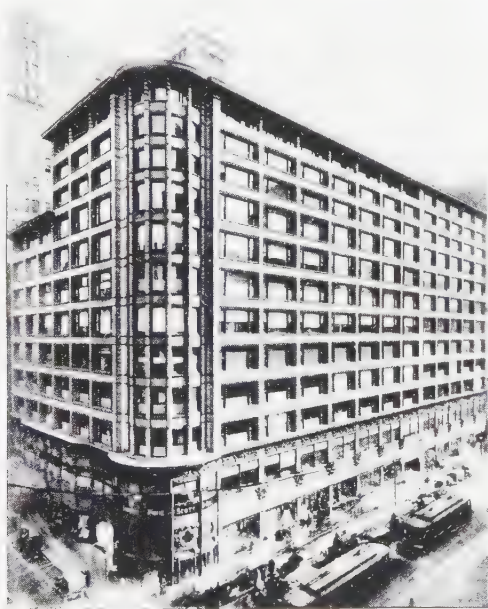


FIG. 125.—CHICAGO. THE SCHLESINGER-MAYER BUILDING. (NOW CARSON, PIRIE & SCOTT)

sign somewhat obscured by the florid ornament that was at once Sullivan's delight and weakness. In many of his buildings, particularly the later ones, the applied decoration is over-insistent. Although undeniably beautiful in itself, it tends to detract from the architectural features of the designs. In this respect, Sullivan yielded to the idea so dear to the romantic mind, the expression of individuality, even though by so doing, he violated the principles of an art which should be social above all else.

It was this characteristic of Sullivan's temperament that pre-

vented him from having the influence on American architecture that his genius would have made possible. He did not give a full account of the social stewardship which is part of the architect's duty. He realized this obligation and its importance; that is obvious in his writings. But his romantic background made him believe the right to express his own individuality to be even more important, and as a result, it was impossible for him to elicit from the forces of the society in which he lived, an expression of the ultimate realities of modern life. In this respect, he differed fundamentally from Richardson who, had he lived longer, would undoubtedly have succeeded in making his style intelligible to the country at large. Sullivan, on the other hand, attempted to break, finally and conclusively, with all that had gone before. In refusing to accept anything of it, he deprived his own artistic creed of foundation. The conflict in Sullivan's own nature that this involved is reflected in his realization that the spirit which produced the tall office buildings was a profoundly anti-social one by virtue of the resultant congestion and chaos, a realization which he attempted to rationalize in his statement that a skyscraper should be a "proud and soaring thing." This was a romantic moral concept which even his own broad formula could not justify. The purpose of height in a skyscraper is not spiritual as is that of a Gothic cathedral. Rather it is to increase commercial value, as an advertisement in structures like the Woolworth and Empire State Buildings, by providing more rentable space, or in the augmented efficiency resulting from centralization of many diverse activities under a single roof. In Sullivan's own buildings, the vertical idea which he championed is not carried through consistently; witness the cornice of the Wainwright Building and the contradiction between the horizontal lines of the first two stories and the vertical ones above.

Sullivan's greatness is not to be found in his buildings or in his expressed theories. Rather it lies in the example he gave of the architect's obligation to consider his art as a social manifestation, expressing the forces at work in society with the same clarity that characterized the work of Roebling and his fellow-engineers. Sullivan stated that the architect should approach his work with the directness, simplicity and singleness of purpose which unconsciously made contemporary engineering projects a source of esthetic delight. To achieve this end, the whole meaning-

less panoply of the forms of older cultures must be discarded, since they were the creation of social and religious complexes wholly unlike existent ones, and the problem of architectural style worked out anew. Sullivan's relative failure to attain this goal himself detracts nothing either from its significance or from his own. His temperamental incapacity to give convincing form to his lofty conceptions was responsible for the personal tragedy that overtook him when he saw the very principles which he condemned exalted in the buildings of the Eclectic Movement, but the ideals for which he strove were destined to live in the works of his student and one-time assistant, Frank Lloyd Wright.

Before considering Wright's contribution to American architecture, the fate of Sullivan's idea must be observed. His kinship with Richardson has already been pointed out. The greatness of both lies in their recognition that architecture is an art of ideas, not of formulas. Its forms must not be mere symbols of past cultures but expressive of the civilization that creates them. In the last decade of the 19th century, the truth of this statement which had been proclaimed by both Richardson and Sullivan was completely obscured by the wave of Eclecticism which swept over the United States following upon the renown achieved by the buildings of the Columbian Exposition of 1893 in Chicago. These buildings had been designed, with one exception, by architects who had been trained in the *École des Beaux-Arts* in Paris; the structures themselves were in the classic tradition as interpreted by the academic French school.

The effect of the gleaming white façades that embodied the classic formulas was immediate and powerful. In their plaster columns and arches, there was a directly perceptible attractiveness not apparent in the sombre pile of the Marshall Field Building and the early steel buildings in Chicago. That this beauty was merely superficial in contrast to the sturdy honesty of Richardson's work and the other functional buildings was not appreciated. The one exception to the spurious stucco and plaster façades with their semblance of stone was Louis Sullivan's Transportation Building. Its design was a frank statement of the impermanent materials of which it was constructed in contrast with the classic and Renaissance façades on all sides. The immediate and popular reaction to these architectural falsehoods is further evidence of the lack of artistic tradition in the background of America in the

'90's. Europeans at the Exposition felt the vitality of Sullivan's building and the commercial structures in Chicago in contrast with the empty abstractions which appealed so powerfully to Americans. None the less, the abstractions carried the day. A new revival of historical forms had been spawned and the course of American architecture was deflected from the direction indicated by Richardson and Sullivan into an *impasse* from which it is only now beginning to retreat.

In the Eclectic Movement, all the historical styles were considered available to the architect in designing a cloak for the steel frames that were in common use by that time. Two general categories are to be noted, the classic which included Renaissance styles, and the medieval. The former is best represented by the work of McKim, Mead and White. McKim and White had both been trained in the Beaux-Arts and in Richardson's office in Boston. Their first works, dating from about 1880, have something of Richardson's sturdy ruggedness, but a break with this style appeared in the design for the Boston Public Library in 1888. It was based on Labrouste's Bibliothèque Sainte-Genève (Fig. 105) with some modifications suggested by Early Renaissance Italian types. Largely because of the influence of this firm, the Roman style was chosen for the buildings of the Columbian Exposition. The distinction achieved by their own designs brought them commissions for many important buildings in the East during the first decade of the 20th century. These included the New York Municipal Building, many of the Columbia University buildings and the Pennsylvania Railroad Station in New York City whose Grand Concourse, an almost *verbatim* transcription of the great hall of the Baths of Caracalla in Rome, is considered their finest work.

Foremost among the adherents of the medieval style in the Eclectic Movement was the firm of Cram, Goodhue and Ferguson. The output of this firm consisted principally of churches and college buildings, representative examples of the former being St. Thomas in New York and the First Baptist Church in Pittsburgh, while the buildings at West Point and a number at Princeton are characteristic of the latter category. The firm was dissolved in 1914, Cram and Ferguson continuing to produce medieval designs. Goodhue, on the other hand, developed a much more individual style which reached its climax in the magnificent State

Capitol in Lincoln, Neb., a building which broke completely with the classic form that had been used for such structures ever since the erection of the National Capitol. Goodhue's death in 1924 was a serious blow to American architecture, for he was nearing the achievement of a modern style incorporating much that could profitably be learned from past styles without being thereby inhibited.

The lack of connection between form and function that is an inevitable corollary of Eclecticism appears in its most exaggerated form in the skyscraper. When the classic eclectics attempted to adapt their chosen forms to the tall building, they apparently overlooked the fact that the classic styles are essentially horizontal in effect. To solve this paradox, they generally regarded the skyscraper as a form comparable to a column with base, shaft and capital. The chief objection to such a solution is the unsatisfactory proportions that usually result. Thus in the New York Municipal Building by McKim, Mead and White, for all the undeniable beauty of the details, the final effect is that of superimposed masonry forms with little or no expression of the steel skeleton. The eclectic skyscraper is more successful when it is based on prototypes that involved some treatment of vertical elements. The *Metropolitan Life Insurance Co. Building* in New York (Fig. 126), by N. LeBrun & Sons, is derived from the campanile of St. Mark's in Venice. As in the New York Municipal Building, there is no expression of the steel framework but rather a suppression of it to produce the effect of solid masonry walls. As a study in abstract form, it weakly reflects the virtues of the original. As an organic expression of the function of a modern office building, it leaves much to be desired.



FIG. 126.—NEW YORK. THE METROPOLITAN LIFE INSURANCE BUILDING.

For an obvious reason, the Gothic style was better adapted to the skyscraper form than the classic. Vertical accents predominate



(Courtesy *The Architectural Record*)

FIG. 127.—NEW YORK. THE WOOLWORTH BUILDING.

in both. This coincidence was responsible for the immediate success of the *Woolworth Building* in New York (Fig. 127) by Cass Gilbert (1859-1934) erected between 1910 and 1913. From a distance, it is not unimpressive. The mass is imposing and the relationship of tower and base well conceived. Furthermore, the steel framework is clearly expressed by the long, unbroken lines of the terra-cotta sheath, particularly from the rear. But even in the Gothic skyscraper such as the Woolworth Building, there is a paradox in the blossoming-out of the hard metallic vertical lines of the building into a frosting of pinnacles, pointed arches and flying buttresses. These are all intrinsically stone forms, employed by the Gothic architect to emphasize the vertical elements in his design and for structural reasons. In the Woolworth Building, they do not occur for structural reasons at all for the strains in the steel framework are not lateral thrusts but forces of tension and compression. Furthermore, the Gothic quality of the Woolworth Building, in addition to being a matter of superficial ornament without structural justification, not only does not ex-

press the function of the structure but interferes with it, since the arched cornices cut off practically all the exterior illumination of the offices immediately behind them.

The sterility of Eclecticism as a guiding principle in architecture lies in the fact that its exponents failed to realize that their art was one of ideas and not merely of forms. The methods they employed were a confession of their inability to give adequate expression to the many-sided character of modern life. Their concept of life was a fundamentally static one for there can be no organic growth in an art which deliberately turns to the dead symbols of past cultures instead of creating its own forms of expression. Eclecticism was merely another aspect of the romantic desire to escape from the reality of the living present into a world clothed with moribund beauty by minds overwhelmed by the complexity of contemporary thought. Its amazing popularity in the early years of the 20th century serves to emphasize the lack of tradition in the American background. Eclectic forms were stamped with academic approval and thereby gained a certain authority which was reinforced by their undeniably sensational qualities. To minds uneducated as yet to the more abstract elements of mass, symmetry, beauty of material and the like by which Richardson and his followers gave expression to their ideas, these forms passed muster as those of great architecture. The Renaissance ideal of art as pure form which separated it from the life of the people has had no more disastrous result than this, that it made the man in the street willing to accept as beautiful what was thrust upon him by the academic eclectics of the late 19th and early 20th centuries.

The Roman temples, Italian campaniles and Gothic cathedrals with which Eclecticism clothed the American scene are only one aspect of architecture in the United States during the period under discussion. The reverse of these polished façades was the incredibly vile slums in which the poor classes were forced to live. So preoccupied were the Beaux-Arts architects with their formal problems that they were oblivious to the tenement regions which sprang up in direct consequence of the urban concentration of population. Only within the last few years has any attempt been made to relieve the shocking conditions that prevailed in these regions. The majority of the flats were of the "dumb-bell" type, so-called by virtue of its shape which made no provision for the privacy, light and air essential to living but was highly successful in producing maximum income from the smallest possible amount of real estate. It is a devastating commentary on the lack of interest in low-cost housing in the United States that "Old Law"

tenements of this type are still permitted to be operated. The congestion in the slums equalled, if it did not surpass, that in the commercial districts where it was the inevitable result of the skyscraper. In both instances, the congestion was a consequence of the non-social thought of the time. Sullivan's recognition of this fact has been pointed out. It is the everlasting disgrace of Eclecticism that its exponents did not even notice it.

In other branches of domestic design, American architecture of the late 19th century reveals little more of distinction than in the tenement houses then built. All that differentiates the academic structures of the eclectic styles from the tall, spiky exteriors (Fig. 118) and the badly-planned gloomy interiors of the Victorian era is the greater sophistication of their forms. Both were the result, as has been pointed out, of the romantic search for beauty. But there is one exception to this generalization concerning the houses of the period under discussion and that is the style developed by Frank Lloyd Wright (b. 1868). Significantly enough, it was a romantic idea that lay behind that style. Regarding the houses of his period, Wright was struck by their inappropriateness to their surroundings. They lacked organic connection with the landscape, the architectural equivalent of Man's oneness with Nature which was an essential feature of romantic thought. To restore this connection was Wright's immediate and conscious purpose, to achieve the fusion of house and setting, to weld architecture and landscape into an organic whole. The "Prairie House" was the result.

The *Robie House* on Woodlawn Avenue in Chicago (Figs. 128, 129) represents the highest development of the "Prairie House." It is long and low, the horizontal lines merging into the level surroundings while judiciously placed vertical accents in the chimney and window frames give the necessary sense of support in the design. The eaves and porches are wide, the roofs of the latter being hung by cantilevers from the framework of the house to afford the openness so essential to comfort in the summer months with the minimum of obstruction. The windows are grouped together in long rows instead of being treated as isolated units, creating a sense of organic relationship between exterior and interior space. The interior (Fig. 129) represents the most original treatment of enclosed space in any style since the Gothic. Instead of considering it as a series of blocks cut off from each other by walls,



FIG. 128.—CHICAGO. THE ROBIE HOUSE.

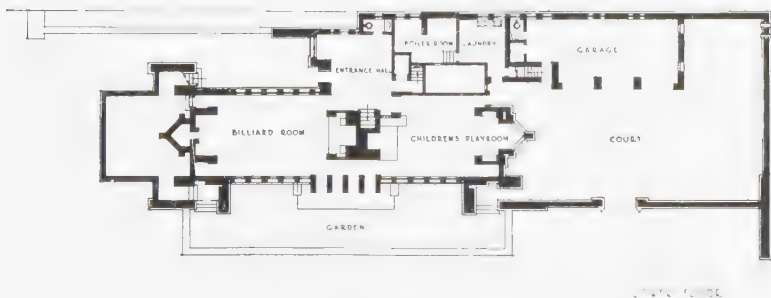
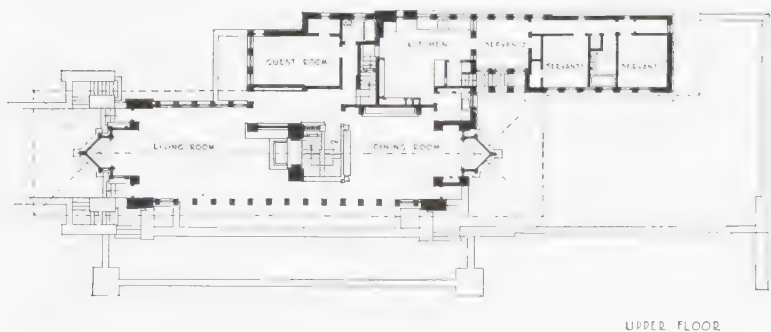


FIG. 129.—CHICAGO. THE ROBIE HOUSE. PLAN.

Wright handled it as a single plastic unit. One space flows into another, unobstructed by walls or doors and focussed around deep fireplaces, thus establishing the oneness of the interior with the exterior whose design centers around the chimney stack. The living-room and dining-room merge into each other, separated only by the chimney stack and the staircase. The service quarters are isolated and the privacy of the bedrooms assured by walls separating them from the rest of the house. The banded windows and broad openings leading to the courts and terraces emphasize the integral unity of interior and exterior. Decorative effects are obtained in the contrasted structural materials and by the fine proportions of the building, there being practically no applied ornament. In designing the "Prairie House," Wright faced squarely the problem of modern living and solved it in the most efficient way that he could. The result is another demonstration of the basic soundness of Sullivan's creed that Form follows Function. Without concession to previous styles, Wright developed a style of his own which was capable of application to many different types of buildings. Incidentally, although Wright's approach to the problem of the modern house was primarily an artistic one, his solution of it revealed a thorough appreciation of the social significance of good architecture. In making provision for the necessities of modern life by insisting upon adequate light and air and free movement from interior to exterior, Wright simply incorporated in his designs the things which are the right of every human being.

In the early years of his career, Wright designed other types of buildings than houses. In the Administration Building of the Larkin Soap Factory in Buffalo, built in 1904, he created an architectural embodiment of the modern commercial spirit utterly different from any previous structure. *Unity Temple* in Oak Park, Ill. (Fig. 130), built in 1905-6, was an innovation in construction as well as in design. It is of concrete poured in moulds and the structure is thus a single huge monolith. The flat roof is supported by four hollow piers which also serve as heating ducts. As befits a modern sect, the form of the church is unrelated to any past style, yet its provision for the needs of the spirit is manifest in the solid outside walls which cut off all possibility of disturbance from the exterior. Entirely different in purpose and form were Wright's designs for the Midway Gardens, an enormous recrea-

tion center in Chicago, and the Imperial Hotel in Tokyo. The latter was a triumph of modern methods of construction. It is supported by huge expanding piles of reinforced concrete resting on the soft mud that underlies the entire city. These piles were so designed as to give the building a flexible and elastic foundation. It was because of this that the Imperial Hotel was able to survive the earthquake of 1923 in Tokyo when practically all the other buildings by foreign architects in the city were destroyed.

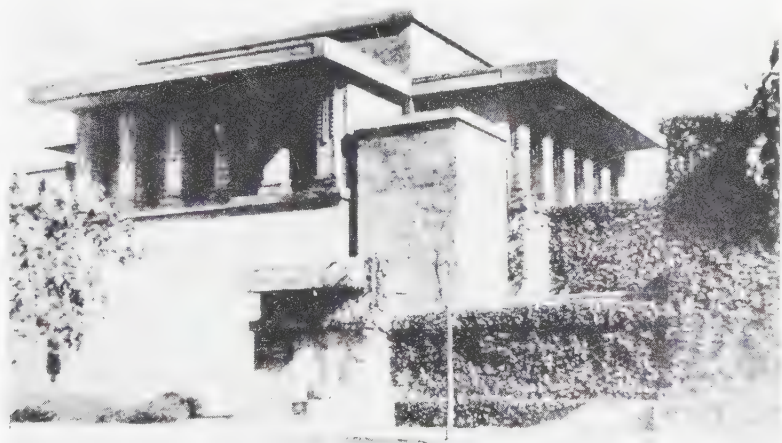


FIG. 130.—OAK PARK. UNITY TEMPLE.

In Europe, architecture of the late 19th and early 20th centuries reveals much the same development that has been observed in the United States. The sharp clash of ideals that is evident in the American scene is not found in Europe, however. There no architect stands out by virtue of an attempt to break with the past as do Sullivan and Wright in America. The rationalism of certain architects, notably Karl Friedrich Schinkel, in the early 19th century has already been pointed out. This rationalism, based on traditional forms, continued through the century as a latent and more or less unproductive force, destined, however, to produce significant results toward its close. Iron and steel were em-

ployed in engineering projects as in America, a notable example being the buildings of the Paris Exposition in 1889. Between the use of iron and steel in these works and the more consciously esthetic manner of such men as Labrouste, a sharp line was drawn. The purely architectural examples of iron and steel construction reveal a persistence of eclectic methods on the one hand and occasional efforts to establish new styles, such as the short-lived



FIG. 131.—BERLIN. THE WERTHEIM STORE.

Art Nouveau movement, on the other. In the early years of the 20th century, a more essentially modern and functional style begins to develop based on the use of steel and reinforced concrete. The most significant examples of this style appear in Holland, France, Germany and the Scandinavian countries.

The *Wertheim Store* in Berlin (Fig. 131) by Alfred Messel is an early example of functional design in Europe, built in 1904. It is a large, irregularly rectangular structure, consisting of blocks around a number of courts. Some of these courts are open to furnish illumination for the interior while others are roofed over

with several levels of galleries opening on them. There are many Gothic reminiscences in the exterior design, the natural consequence of a strong regional tradition. The medieval forms are used as a decorative sheath for the steel framework, which they express rather effectively in the long vistas of the unbroken street façades. In their compliance with medieval usage as regards detail, proportion and effect, they contrast with the more arbitrary methods seen in the Woolworth Building. Within, the steel construction is frankly exposed and unobscured by decoration as in the somewhat earlier Bon Marché and Printemps stores in Paris.

The functional similarity of Messel's store and Sullivan's Schlesinger-Mayer Building in Chicago (Fig. 125) suggests a comparison between them. Of the two, that by the American is more direct in its statement of function and construction. Even today it is an essentially modern design while the Wertheim Store is a typical example of a past style. This does not detract from its importance. Had Sullivan revealed more sympathy for tradition, his design would doubtless have had a greater influence. As it is, it stood alone in the American development and its significance has only recently been fully appreciated. In contrast with this, Messel's building became a model for such structures almost at once; its influence can be noted during the entire decade following its construction. The Tietz Store by Olbrich, built in Düsseldorf in 1908, is an example.

In contrast to Messel who employed traditional forms in the Wertheim Store as decorative adjuncts to modern construction, Peter Behrens (b. 1868) evolved a style which was based entirely on the use of steel, glass and concrete as building materials. In 1907, he was appointed as architect of the A. E. G., the General Electric Company in Germany, and the many buildings in Berlin that he designed for that company constitute the most important single body of modern construction in pre-War Europe. Almost all the buildings are factories and power-plants and practical efficiency was invariably the main consideration (Fig. 132). Since they were essentially utilitarian in character, applied decoration would have been not only costly but inappropriate. The materials are steel, glass and the brick used in the region as a medium of construction ever since the Middle Ages. Color contrasts play an important part in the effect, the warm red of the brick against the greyish-green of the slate roofs and windows, with purplish ac-

cents in the stone trim of the doors. The construction is frankly expressed throughout, as modern as is the purpose of the building, which attains monumentality through its proportions and vigorous outlines. Perhaps the most modern feature is the way in which the texture and color of the materials employed are utilized for decoration. Not only is the expense of applied ornament thus avoided but also the diluting effect which such ornament would have upon the clean-cut lines and masses. It is not without significance that

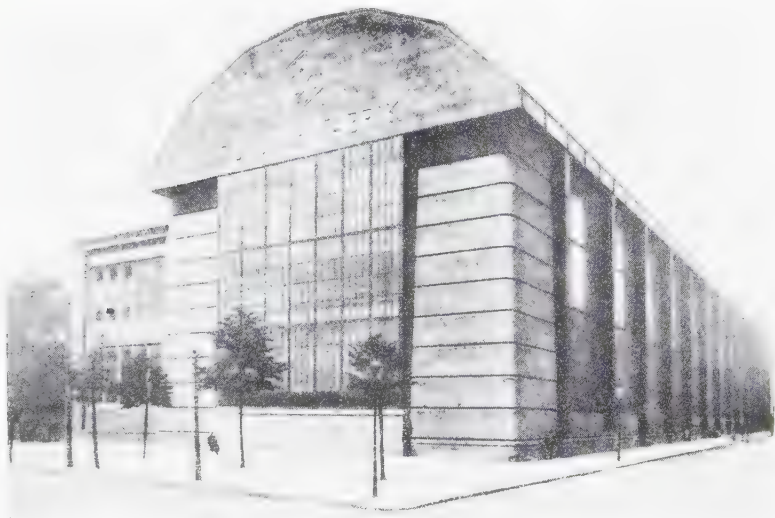


FIG. 132.—BERLIN. TURBINE FACTORY OF THE GENERAL ELECTRIC COMPANY (A. E. G.).

in Europe, such strictly utilitarian buildings as these were designed by architects. In America, the nearest approach to them are the great grain elevators of the Middle West whose anonymous designers created better than they knew. Prosaic as they are in function and appearance, the elevators contain an element of honesty that is all too often lacking in the more pretentious houses and offices of their owners.

If Behrens' work is open to criticism, it is on the grounds that his grasp of the nature of modern building materials was not complete. The legitimate effect of glass and steel used as constructive materials is one of openness, suggesting volumes of space

that are screened in by the materials. In Behrens' designs, they are often employed to secure traditional effects of mass through the treatment of surface and outline. In this type of effect, none of Behrens' buildings can compete with the *Stuttgart Railway Station* (Fig. 133) by Paul Bonatz (b. 1877) built between 1913 and 1927. There is a Romanesque air about it, but one due entirely to the material employed and the method of employing it rather than to any specifically Romanesque ornament. In this

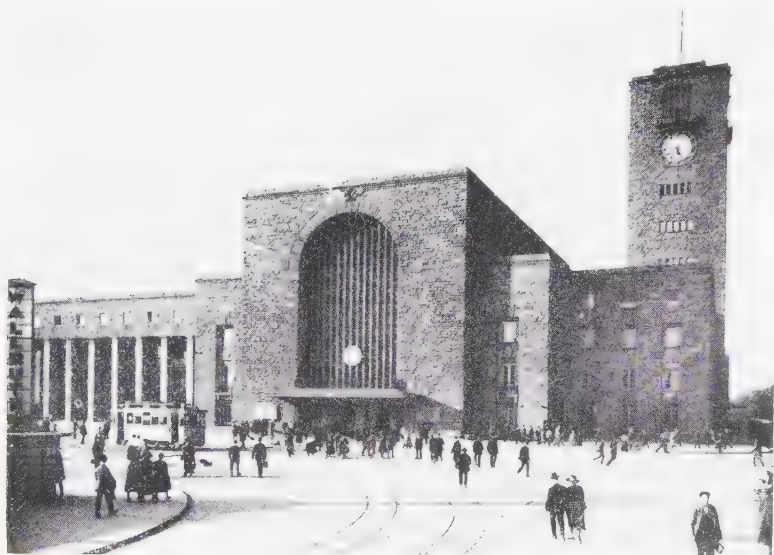


FIG. 133.—STUTTGART. RAILWAY STATION

respect, it is not unlike Richardson's Marshall Field Building in Chicago (Fig. 120). The use of stone throughout is a traditional aspect, and in regions where it is abundant, more logical than the use of steel and concrete. Because the building is of stone, the predominant effect is one of masses, well proportioned to each other in form and outline and with a fine sense of surface texture. For these qualities, the Stuttgart Station is beyond question one of the finest single examples of the traditional pre-War European style. Its effects are perfectly logical ones for the material employed and owe nothing to past styles, in which it stands in notice-

able contrast to the Wertheim Store. At the same time, it reveals, as does the Marshall Field Building; the possibility of applying traditional methods to modern problems without subsiding into sterile Eclecticism.

The late 19th and early 20th centuries constitute the period in which modern architecture was born. New manners of living, new building programs, new methods and materials of construction, all made their appearance at this time. Their combined effect was to stimulate the development of a new architectural style. The nature of that style is first suggested by the steel-framed skyscrapers of the '80's in Chicago from which it might be concluded that the most fundamental developments are to be looked for in architecture in the United States. Actually, the style developed in Europe during this period of gestation has produced more significant results. There the weight of tradition exercised a certain restraint and European architects were not so quick to seize upon the new methods and materials as the unencumbered Americans, but by virtue of that tradition, they were also able to avoid the difficulties that beset the path followed by Sullivan and Wright. For the same reason, the Eclecticism that predominated in American architecture of the early 20th century is present to a far less degree in Europe. As pioneers, Sullivan and Wright paid the penalty of all innovators; only within the last decade has American architecture in general caught up to them. Thus it is that in the period under consideration, there were no finer buildings erected in Europe than Sullivan's Schlesinger-Mayer Building, but the number of distinguished modern buildings in America was far less than in Germany, Holland and France.

CHAPTER XV

CONTEMPORARY ARCHITECTURE

IN THE predominantly eclectic architecture of the early 20th century in the United States, the skyscraper was treated according to either of two formulas. The classic method was to consider it as a column with base, shaft and capital. The Gothic skyscraper was a study in sheer unbroken vertical lines with a sheath of stylistic ornament. Whatever the superficial style of the individual buildings, the result when many of them were concentrated in a restricted area was the same. The streets became deep canyons whose bottoms were hardly ever reached by the sunlight, detracting considerably from the commercial value of the buildings involved, particularly the lower ones which were completely overshadowed by their loftier neighbors. The situation thus created was rapidly becoming worse as there seemed to be no limit to which the height of the skyscraper might be pushed. To remedy it, ordinances which affected the basic form of the skyscraper were passed in many of the larger cities, the first being that of New York in 1916. In general, they stipulate that a building may not rise from the street in an unbroken vertical plane beyond a certain height which depends upon the width of the street. Any further vertical construction must begin at a point set back from the original vertical plane. Thus instead of being a tower or column whose unity depended upon its vertical continuity, the skyscraper prescribed by the set-back ordinance was a series of superimposed blocks or masses. This posed an entirely new problem in skyscraper design, different from that which had engaged the attention of architects up to the time of the set-back ordinances.

In the first buildings erected under its provisions, very little attempt was made to do more than meet them. Cubical masses were set one upon the other with nothing in the designs to clarify or unify their functional relationships. The eclectic habit was still strong. In such a structure as the Shelton Hotel in New York by Arthur Loomis Harmon, erected in 1923, the slight projection of the vertical strips only barely suggests the steel

frame. The applied ornament of the entrance portico and the pseudo-gargoyles at the top are fundamentally eclectic. The same can be said of the suggestion of mass given by the design as a whole, appropriate enough in masonry construction but directly opposed to the open lightness that is a legitimate effect of steel construction.

In 1922, a definite challenge was offered to American architects in their chosen field. The *Chicago Tribune* inaugurated a competition, open to any and all who wished to enter, to obtain a design for the new quarters of the newspaper which was to be "the most distinctive and beautiful office building in the world." Scores of projects were submitted ranging in quality from the depths of eclectic ineptitude to a height never reached before in a modern skyscraper design. First prize went to the firm of Raymond Hood (1881-1934) and John Mead Howells (b. 1869) and from their designs the *Chicago Tribune Tower* was erected (Fig. 134). It is Gothic, correct in detail, admirably studied in its abstract decorative effect and almost totally devoid of any meaning from a modern point of view. Above the base with its incrustation of Gothic ornament, the unvarying verticals of the Indiana limestone sheath give a direct impression of the steel framework of the tower. But at the top is a series of flying buttresses springing from the slender vertical shafts to form a transition to the central crown which resembles a Gothic shrine. Viewed as masonry, the entire upper part of the building is much too heavy for the delicate piers below. Viewed as steel, there is no justification for the undeniably stone forms of the buttresses and the shrine that seem to blossom out of the vertical shafts beneath. A set-back appears in the small addition to the right. It has no very definite connection with the main block of the building but seems rather like a separate and individual tower in its own right.

The second prize *Design in the Tribune Competition* (Fig. 135) was by Eliel Saarinen (b. 1873), a Finn. When all the projects submitted were published, there was a wave of protest against the decision that put Saarinen's design below that of Hood and Howells. Here was a skyscraper that was really modern. It was as if the ideals of Louis Sullivan had come to life again, as indeed they had for Saarinen willingly acknowledged his indebtedness to the older man. The design is perfectly straightforward in its statement of the steel frame with nothing like Hood's stony

buttresses to belie it. It is that of a tall building and height is the outstanding element in its effect. But the greatness of the design



FIG. 134.—CHICAGO. THE CHICAGO TRIBUNE TOWER.

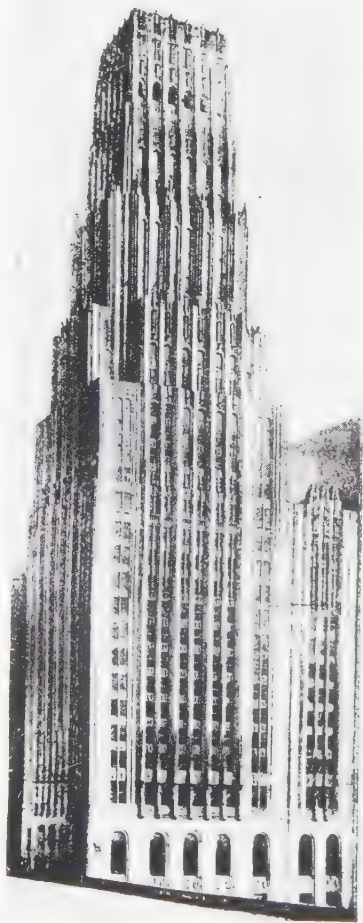


FIG. 135.—SAARINEN'S PROJECT FOR THE CHICAGO TRIBUNE TOWER.

does not lie in objective details. Rather is it to be found in the revelation of Saarinen's ability to face squarely the problem of

the skyscraper and to solve it with the straightforwardness and logic which constitute the ideal of modern efficiency. Formal beauty is attained through observance of functional requirements, rather than by superficial attractiveness as in the static eclectic forms of Hood's tower. Saarinen's design was for a building as modern in function and appearance as the great printing presses it was planned to house.

For all the fact that Saarinen's project was never erected, the ideas he incorporated in it exercised a profound influence on American architecture while Hood's structure has been correctly classified since being erected as simply another eclectic building. Very few tall buildings erected in the United States since 1925 have failed to show Saarinen's influence to some extent, at least those which make any pretense of modern style. The *New York Telephone Building* (Fig. 136) by the firm of Voorhees, Gmelin and Walker, which was erected in 1926, is an example. There are no reminiscences of historical styles with the possible exception of the arched openings at the top of the crowning central tower. The mass of the building is broken up by the set-backs but the resultant forms are well related to each other. This is achieved by having them all build up to the central tower and by the pronounced vertical accents that reveal the steel framework. The sparing ornament consists of geometrical motives repeated unvaryingly to form designs appropriate to the mechanical methods by which it was executed. In effect, the building is admirably expressive of the unlimited mechanical power of the Machine Age in its stark simplicity and the brutality of its massive forms. The same characteristics can be seen in other buildings by the same firm such as the Bell Telephone Building in Newark, N. J. and the Irving Trust Co. Building at No. 1 Wall Street in New York City. The influence of Saarinen's Chicago Tribune design is apparent even in later buildings by Hood and Howells such as the New York Daily News Building of 1930.

The tendency in contemporary skyscraper design revealed by the buildings discussed in the foregoing paragraph would be encouraging were it not for the fact that every attempt to solve the problem of the tall building in an honest way is matched by at least one in which the eclectic method is continued. In the New York Life Insurance Building (1929) Cass Gilbert attempted to ring the changes on the Gothic style which had brought him such

renown in the Woolworth Building. The New York Central Building occupies a site which might easily have made it the dominating accent in central Manhattan and the problem involved of providing complete traffic facilities through the structure



(Photo Sigurd Fischer)

FIG. 136.—NEW YORK. THE NEW YORK TELEPHONE COMPANY BUILDING.

itself would have presented a stimulating challenge to a modern-minded architect. Yet Warren and Wetmore who executed the designs did nothing more than turn out another structure in the Renaissance manner. Even the skyscrapers which have been hailed as milestones of progress, the Chrysler Building by William Van Alen and the Empire State Building by Shreve, Harmon and Lamb, are not sincerely modern. They represent adaptations by

academic minds of the style made classic by the pioneers. Their architects have learned a few superficial "modernistic" mannerisms which they spread over their façades in much the same way that their predecessors of twenty-five or thirty years ago were spreading Renaissance and Gothic details. Time will reveal the results in one case to have no more importance than in the other.

Such structures as the Chrysler, Empire State and R.C.A. Buildings represent the climax of Sullivan's concept of the skyscraper as a "proud and soaring thing." They demonstrate well the basic unsoundness of that idea for there is no justification for their height other than its advertising value. Furthermore, they indicate that emphasis on the tall building in its present form as the foundation of modern American commercial architecture has had the results which Sullivan himself foresaw. As an element in city planning, the skyscraper contributes directly to congestion in the financial districts of the larger cities, a congestion which has already strained available means of transportation beyond their capacity. In addition to this, even as financially profitable ventures, skyscrapers have not come up to expectations. Unrestrained competition has resulted in a vast over-production to which the untenanted floors of the Empire State and R.C.A. Buildings bear silent testimony. The problem of vertical transportation still presents many difficulties. The speed of an elevator is limited to not more than twelve or fifteen miles an hour by purely physiological considerations; the many shafts required in a modern skyscraper consume valuable space to the extent that the legitimate income of the building must be augmented by charging fees to ascend to the observation towers that are usually found at their summits. The proportion of returns to original investment is much higher in the first skyscrapers to be built, the fifteen and twenty-story buildings of the '80's in Chicago.

The verticality of the American skyscraper is open to criticism on the foregoing purely objective grounds. Equally questionable is its unity as a work of art. A skyscraper like the New York Telephone Building (Fig. 136) is vertical only on the outside. Its interior does not consist of a multitude of thin shafts as might be deduced from the external appearance but of horizontal volumes of space. This is quite apparent when the superficial verticality of the exterior is not visible as at night when lighted windows indicate the actual arrangement of the interior space. In other

words, while the greater part of contemporary skyscraper design may be partially functional in that it indicates the vertical steel supports, it is not completely so for it does not express the arrangement of interior space. In possessing this latter characteristic, the design of the *Philadelphia Saving Fund Society Building* (Fig. 137) is one of the outstanding developments in recent commercial architecture in America. The architects were George Howe (b. 1886) and William Lescaze (b. 1896) and the building was completed in 1932. The idea of verticality as an esthetic end in itself is dispensed with. The vertical supports are expressed in the aluminum strips at the sides and the elevator shaft also provides a vertical accent which is functionally justified. But the floors are cantilevered throughout, making possible the continuous banded windows which are not only more efficient but more justifiable esthetically than the type seen in the New York Telephone Building (Fig. 136). In the latter for all the verticality of the design, there is still the effect of a solid bearing wall owing to the emphasis on the

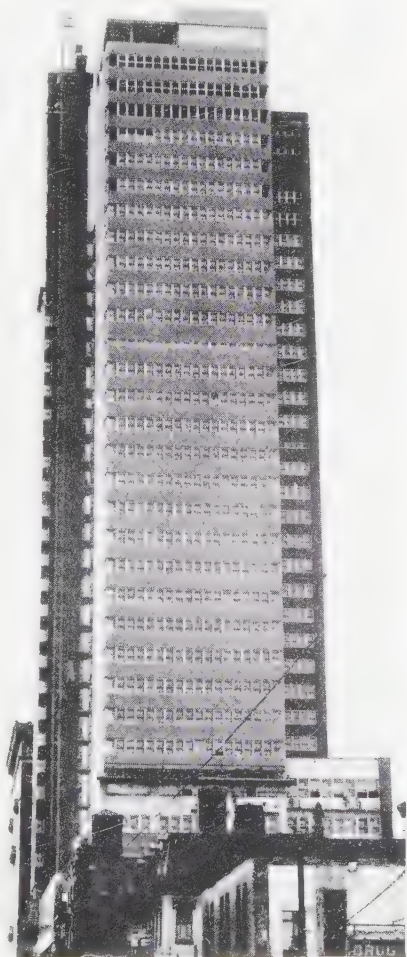


FIG. 137.—PHILADELPHIA. THE PHILADELPHIA SAVING FUND SOCIETY BUILDING.

strips separating the windows. In the Philadelphia building, the openness of the framework is given full expression on the exterior which becomes thereby the outer surface of a volume of space rather than a mass whose solidness belies its actual function as a mere screen. Furthermore, it indicates the division of that volume of space into horizontal layers corresponding to the stories instead of denying it by a superficial verticality. Contrasted materials play an important part in the exterior design of the building; the base is faced with granite slabs, the two stories immediately above with limestone while the horizontal strips between the windows are of gray brick.

In comparison with the average American skyscraper, the structure by Howe and Lescaze is an example of architecture as an art rather than mere building. By this is meant acceptance of functional requirements as the raw material from which the architect evolves a form possessing in its own right a beauty of form and material at the same time that it gives complete expression to the function of the building. In contrast with this, the form of the traditional American skyscraper either has little to do with its function or goes to the opposite extreme in being determined entirely by function with no regard for esthetic quality. In either case, the result is something less than architecture.

Between the best architecture in Europe and that in America during the post-War years, there is a wide difference. If one reason for this could be given, it would be that European architecture is a matter of *Style* while that of America is one of *Styles*. The distinction has already been suggested in the discussion of pre-War architecture in which an outstanding feature was the efforts of Peter Behrens and others to discover the possibilities of the new building materials in contrast with the use of meaningless eclectic forms in current American design. As early as 1910, the German Walter Gropius had constructed a factory for the Fagus Company at Alfeld a.d. Leine which consisted only of steel supports cased in concrete and framing vast, unbroken expanses of glass. The latent possibilities suggested in the work of these pioneers in the field were more completely realized in the years after the War.

The International Style of post-War European architecture, so-called by virtue of its wide dispersion regardless of national boundaries, has three outstanding characteristics. The first of

these is emphasis upon volume of space, rather than volume of mass with its suggestion of solidity, as a basic principle of design. The second is regularity in spacing the elements of the design rather than disposing them symmetrically on either side of a principal axis as in most of the historical styles. The third is dependence for decoration upon good proportion and the intrinsic qualities of the materials employed rather than on applied ornament. Each of these characteristics is a direct result of the new methods and mediums of construction made available by scientific progress in the late 19th century. The first is a logical corollary of the steel framework supporting sheets of glass or curtain walls of some opaque substance whose primary function is the delimitation of space. An effect of mass or solidness would hardly be appropriate in a form discharging such a function. The second characteristic is also a result of the steel frame as a basis of construction. The vertical supports and the horizontal girders that connect them are spaced at equal distances in order to achieve equal distribution of the strains. In consequence of this, the skeleton has a basic and regular rhythm which should find expression in the design of its protecting sheath. The legitimacy of these two characteristics admitted, the avoidance of applied ornament in the traditional sense is mandatory, for its use would result in an impression of mass as well as an obscuring of the regular rhythm of the design. From this it follows that decoration in the modern style must necessarily be intrinsic in the building itself, in its general proportions, the elegance of the materials employed in its construction and the technical perfection of the construction.

In the *Bauhaus* at Dessau in Germany (Fig. 138) Walter Gropius (b. 1883), one of the foremost exponents of the International Style, demonstrated the possibilities of a modern style based on modern constructive methods and materials. The building illustrated was erected in 1926 as the work-shop of the Grand Ducal Art School previously at Weimar. The purpose of the school was to develop forms of architecture and interior furnishings appropriate to the Machine Age. The workshop was one of a group of buildings which also included a studio, a school and an administrative office. In the design of the group as whole, Gropius achieved an effective integration of the various units

through fine proportions and appropriate treatment of constructive materials. His thorough grasp of the nature of those materials made the design one of volumes of space rather than mass, for if the screening function of a wall is performed by a sheet of glass, an effect of mass would be not only inappropriate but a denial of the supporting function of the steel frame. The regularity characteristic of modern design is created by a rhythmic recurrence of accents indicating the piers of the long side, a regu-

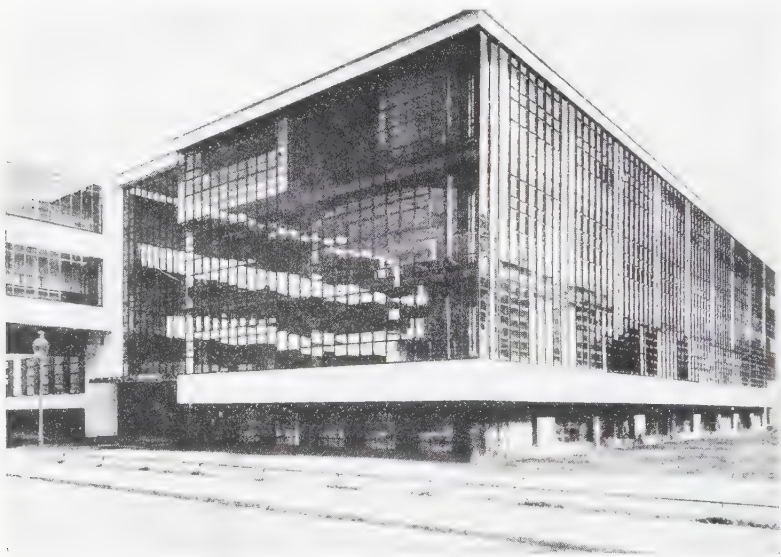


FIG. 138.—DESSAU. THE BAUHAUS.

larity broken on the short side by functional adjustment to the entrance. As a form determined by functional requirement and attaining an esthetic effect in terms which are a logical consequence of the materials employed, the Bauhaus is as much an example of architectural style as the Parthenon or the Cathedral of Amiens. Furthermore, in its avowed purpose of applying Machine Age principles of efficiency to household furniture and appliances, the obligation of the creative artist to Society is acknowledged. The Bauhaus is not the only proof of Gropius' understanding of the sociological problems of modern architecture. In various projects in the field of low-cost housing, he has applied his genius for

organization to the achievement of results esthetically fine as well as functionally efficient.

Probably the best-known post-War European architect is Le Corbusier. Born in Switzerland in 1888, his early training was such that he has always considered the esthetics of architecture to be more important than the solution of constructive problems although his contributions in the latter field have been very significant. He is preeminently a designer of houses and his



FIG. 139.—POISSY-SUR-SEINE. THE SAVOYE HOUSE.

concept of the house as a "machine for living" has been very influential, no less from actual buildings designed by him and embodying that idea to some extent than from his writings. The idea indicates the ultra-functional element in his early theories which was none the less subordinated to esthetic considerations, and is even more so in his later designs. The *Savoye House* (Fig. 139) at Poissy-sur-Seine near Paris was built in 1929-30. It is of concrete with cantilevered floors, the general form being symmetrical to a degree rarely found in a style depending on regularity rather than a similar distribution of elements with

reference to a main axis. In contrast with the symmetry of the lower part, the windshelter on the roof is entirely abstract in form. The banded windows of the second story are made possible by the cantilever construction but stop short of the corners to avoid breaking the surfaces that bound the inner volume of space. The lower part of the house is dark green, the walls of the second story are cream. With these parts whose forms are determined functionally, the windshelter is contrasted by its blue and rose color no less than by its form which requires no structural or functional treatment. A decorative effect is thus attained by the proportions of the structure and the quality of the materials employed. In many of Le Corbusier's houses, his interest in esthetic elements appears in the use of very expensive materials, just as his insistence upon mechanical efficiency leads to the introduction of the many refinements made possible by modern invention. These together with the expense of heating a house as open as this and with such vast expanses of glass put his projects far beyond the reach of all but the wealthiest patrons. For this reason, Le Corbusier's contribution to sociological architecture has not been as great as that of some of his contemporaries'. In his books *Toward a New Architecture* and *The City of Tomorrow*, his recognition of this aspect of modern architecture is apparent but his practice is not always entirely consistent with the credo therein set forth.

"Without succumbing to an arid rationalism, the new architecture will be essentially utilitarian; but utilitarian without excluding aspirations of a superior order." In these words are embodied the ideal of J. J. P. Oud (b. 1890), the outstanding figure in modern Dutch architecture. His training was different from that of Le Corbusier in that it was in the most modern and progressive tradition from the outset. The chief influences upon his early style were those of Berlage, the first modern Dutch architect, and Frank Lloyd Wright. The field in which Oud has won particular distinction is that of minimum cost housing. Interest in this form of construction has been a dominant factor in determining the development of architecture in all parts of Europe since the War. Oud has designed very few private houses since his first group project for a series of workers' dwellings at Rotterdam in 1918, for his efforts have been expended on similar works since that time. Of these, an outstanding example is the group

of *Workers' Houses at the Hook of Holland* (Fig. 140) in 1926-7, in which an esthetic effect is achieved entirely in terms of modern construction, and furthermore, one that is possible only in them. Regularity of design is outstanding in the separate blocks though the two main ones are symmetrically disposed. The balconies, flat roofs and banded windows create a severe horizontality of straight lines with which the circular stores at the ends of each block form an effective contrast. The glass walls of the



FIG. 140.—HOOK OF HOLLAND, WORKERS' HOUSES.

stores permit the steel frame of the structure to be seen. Color is skilfully used to augment the decorative effect of the ensemble.

The high quality of Oud's design does not depend on the mechanical organization that distinguishes Gropius' work nor yet on the technical and decorative refinements of Le Corbusier's. Rather it is the result of an esthetic discipline imposed by definite requirements which must be met in the most effective manner possible, both as to form and function. Oud's long years of experience in planning low-cost housing made his building in the Housing Exposition at Stuttgart in 1927 the only one among those submitted by sixteen architects that fulfilled the technical

requirements within the stipulated cost without sacrificing esthetic effect. The prosaic nature of the type of building to which he has given all his attention has kept him out of the limelight which gives Le Corbusier's imaginative projects and stimulating writings wide publicity. Yet the solid foundation of Oud's present style will serve as a support for further advances while the more brilliant works of his better-known contemporary frequently have little more than passing and individual value. In the entire body of low-cost housing which has been created to meet post-War conditions in Europe, there is no work that is superior to Oud's best and little that can even approach it in quality.

Only recently have American architects turned to the problem of group housing. To a large extent, the absence of communal planning of any sort is due to outmoded conventions of thought, the concept of the house as a sentimental rather than a practical thing together with the vices attendant upon the principle of individual ownership. With the exception of the recently developed plan of Radburn, N. J., and possibly one or two others, there is nothing in the United States worthy of comparison with the hundreds of planned communities that have sprung up in Europe during the years since the War. "Suburban development" has invariably been synonymous with purely commercial real estate projects with no higher aim than personal aggrandizement. For these reasons domestic architecture in the United States is limited to apartments and private houses. Of the former, there is neither room nor need to speak here. Apart from such rare examples as the "modernistic" Beaux-Arts Apartments in New York by Raymond Hood or the Garden Apartments in Los Angeles by Richard Neutra, one of the leading exponents of the International Style in America, they reveal little but conformity to eclectic methods.

In private house design, there is more material for consideration in American architecture. The *Millard House* in Pasadena, Calif. (Fig. 141), by Frank Lloyd Wright, was erected in 1921. The contrast it forms with Wright's earlier "Prairie House" type (Fig. 129), which was developed for the Middle West, is evidence of the strong sense of locality which makes the houses Wright has designed an integral part of their surroundings. It is apparent, for example, in the flat roof and relatively small windows which are as appropriate in California as the low gables and large windows are in the "Prairie House." Another feature is the carefully estab-

lished relationship between the house and its immediate setting in which Wright's romantic background is apparent. The method of construction represents one of Wright's contributions to the modern repertory. The house is built of concrete blocks, pre-cast in moulds with patterns which are impressed in the blocks themselves. The ornament is thus an integral part of the con-

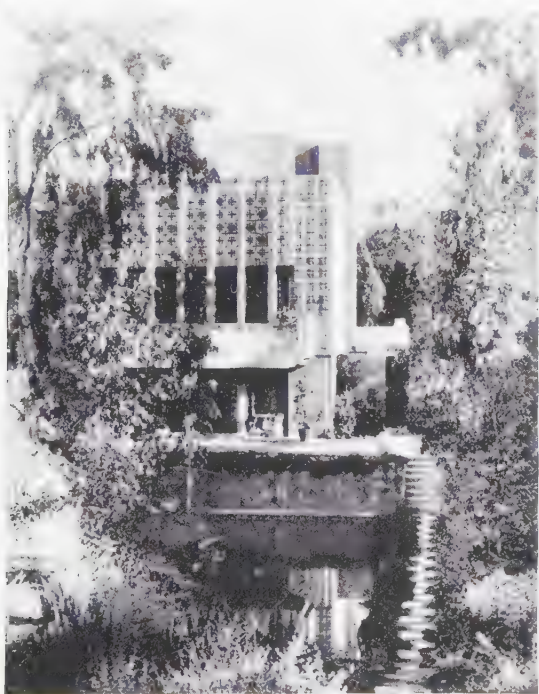


FIG. 141.—PASADENA. THE MILLARD HOUSE.

struction and gives a fine sense of texture to the walls in contrast with the plain bases. Comparison of this phase of Wright's work with a modern European house (Fig. 138) is illuminating. The same materials are employed in both but Wright still conceives his building in traditional terms of mass; the walls are the supports. Le Corbusier treats the same problem as a study in volumes of space with the walls serving only as screens between the interior and the exterior.

Judged by traditional standards of American house design, the changes wrought in exteriors by the International Style are very extensive. Yet it is doubtful if they are of greater significance than the revolution that has been achieved in the treatment of interiors. From the outset, modern design has revealed a preoccupation with interior arrangement and furnishing. "The sense of the within as reality" was an important factor in the evolution of Wright's domestic style. A reorganization of the contemporary interior was one of the salient features of the Dessau Bauhaus program. Le Corbusier has devoted much time and effort to designing furniture and household equipment, approaching them as he does the larger problem of the house itself from the viewpoint of their adaptability to the needs of the Machine Age.

Miës van der Rohe (b. 1886) is the last architect to be considered of the four outstanding Europeans practicing today. His early training as a designer of furniture in the office of Bruno Paul gave him a respect for fine craftsmanship and the value of carefully wrought detail which he later carried over into his treatment of the house as a whole. Just what that is can be seen in the view of the library and living room of the *Tugendhat House* at Brno, Czechoslovakia (Fig. 142). Both rooms are considered as parts of one large volume of space, distinguished from each other by the slab of onyx which in no sense divides the space into separate units. The gleaming chromium supports form a regular pattern and are a part of the general decorative scheme of contrasted textures and colors. The walls are entirely of glass and can be lowered, permitting completely unobstructed passage between interior and exterior space. The relationship of the two is always in terms of the former in Miës' designs, for he considers the outside of a house as part of the inside. His designs are characterized by an acute sense of the quality and texture of the luxurious materials he employs. The curtains which can be drawn across the great windows of single sheets of plate glass are of velvet. The macassar wood of the furniture and the onyx wall complete an ensemble of great effectiveness. The contrasting and apparently intersecting planes of various materials in Miës' interiors are an integral part of his treatment of space as a series of related yet individual volumes. He is less concerned with an out-and-out functionalism than many of his contemporaries although he believes that the artistic ideas essential as a basis of



FIG. 142.—BRNO. THE TUGENDHAT HOUSE, INTERIOR.

judgment should be developed while the artist is learning good building. His furniture designs, for example, are determined by long and careful experiment with the aim of combining the greatest comfort with the finest esthetic effect. He thus groups himself with the architects who hold that form and function are of equal importance.

The contrast between American and European architecture of the years since the War is due to different conceptions of the function of the architect. In America, he is the purveyor of a commodity and his chief aim is to please his patron. In Europe, the architect is traditionally an artist and is primarily concerned with esthetic problems, a fact which is made apparent by the unconsciously esthetic effectiveness of much work by European architects who maintain that their only aim is to achieve functionally perfect designs. The results attained in either case fall short of consistent greatness. In American architecture at its best, they consist of structures which are admirable functionally but negligible from the point of view of style. In Europe, they are functional and have a great deal of style but with rare exceptions, they still fall short of being works of art. In both, an element essential to greatness is missing, for neither one has yet produced an adequate symbol of truth universally if unconsciously recognized as valid. The ideal of American architecture is to produce buildings that will be satisfactory to those who pay for them. This is unquestionably an ideal but it is one that is valid only for the architect and his patron. That of European architecture is the attainment of formal beauty which is also a definite objective, but neither can it be justified as the highest function of architecture. That is realized only when a style becomes the expression of a collective, unconsciously realized ideal which produces order out of the chaos of experience and provides a universally accepted standard of thought. When such an ideal exists, as it did in the fifth and 13th centuries, the style to give it expression will be forthcoming.

SCULPTURE

CHAPTER XVI

SCULPTURE: METHODS AND TERMINOLOGY

TO THE average person, the term sculpture evokes an image of a human figure in stone or metal. Sculpture is not limited to these materials, however, as any substance may be used which has sufficient density to retain the form given it by the artist. Some of the earliest sculpture is in bone or wood while modern sculptors have been much interested in rare stones of the less expensive varieties as the materials of their art. There is, in fact, no limit to the substances available for sculpture, ranging all the way from soap and butter to solid silver. Obviously similar methods cannot be used in handling all materials. A medium that is soft, such as clay, will lend itself to a modelling technique which consists of squeezing and shaping the material and adding to it as the artist's conception of the figure grows. In contrast with this, a hard medium such as stone or wood requires a process of taking away from the original block. The sculptor cuts the figure out of the substance, shaping it with a chisel or file.

A metal statue is produced by a method different from either of the foregoing. The desired figure is first modelled in clay or wax as a general rule. A mould is made of this figure by surrounding it, after it is well covered with some lubricant, with liquid plaster of paris, gelatine or any fluid substance which becomes solid after exposure to the air. After the mould has hardened, it is removed in pieces, re-assembled and the hollow formed by the original figure filled with melted metal which flows into the cracks and crevices on the inside. When the metal cools and hardens, the mould is removed and a metal replica of the original clay or plaster figure is found. Two disadvantages result from this method of casting a metal figure. If it is a large one, its weight is very considerable. Moreover, the metal in the center cools much less rapidly than that near the outer surface, setting up a mechanical strain in the figure which might cause it to crack. Both of these disadvantages are avoided by making the metal figure hollow. A core is inserted in the hollow mould which

reproduces the general form of the original clay or plaster figure but is somewhat smaller. This core is usually covered with soft wax which takes the exact shape of the original figure when the mould is squeezed around the core. The hot, liquefied metal is then poured into the space occupied by the wax which melts and runs out of small openings or vents provided for the purpose. When the metal hardens, the outer mould is removed and the inner core raked out. The result is a metal shell reproducing exactly the configuration of the original clay or plaster figure. This is the essence of the *cire perdue* process of casting which has been employed in one form or another for metal statues from the earliest times to the present. In recent years, metal statues have been made by an electrolytic process which deposits the metal on a plaster core covered with plumbago or black lead, but this method has not replaced the *cire perdue* process in general favor.

A metal statue is usually of the modelled type since it reproduces a clay original, rather than the chiselled type of the stone or wooden figure cut out of a block. Until the Renaissance, stone figures were nearly always carved directly with the sculptor using, at the most, only a small model as a guide. Since the beginning of the 16th century, a mechanical method known as pointing has been in general use. A full-size clay or plaster figure is made on which a number of points are marked. These are transferred mechanically to a block of stone by drills which bore into it to depths determined by the locations of the points on the original figure. When all the points have been transferred, the stone is cut away to the extent indicated by the depths of the holes. The result is a reasonably exact reproduction of the general form of the model which the sculptor then finishes off with chisels and rasps. The pointing method is practically the only one in general use today. It has largely supplanted the practice of cutting directly in the stone block for by indicating the depths beyond which the sculptor must not carve, the possibilities of ruining an expensive piece of material are considerably lessened.

Sculpture in general may be divided into types according to whether the figures are in relief or free-standing. The first term refers to figures which are attached to a background, while the nature of the second is indicated by the name. A free-standing figure can be seen from all sides while relief sculpture is visible only from the front. In the general category of relief, there are

the sub-divisions of high and low. High relief is that in which the objects represented project very definitely from the background and appear to be almost in the round. In low relief, the forms have relatively little projection. The difference between them is one of proportion, of course, for a large figure in low relief may actually project farther from its background than one a quarter of its size in high-relief.

A still further general distinction in sculpture is that of decorative and free figures. Decorative sculpture is planned as part of a larger whole. This means that it is not independent and self-sufficient but depends for its effect upon relationship to something else, usually to a building. The greater part of relief sculpture is in this category. A form of decorative free-standing sculpture can be seen in the illustration of the Gardens of Versailles (Fig. 93) where the figures are accents in a planned landscape. Free sculpture, which is not to be confused with free-standing sculpture, is that which has not been planned with some definite relationship to a comprehensive scheme, such as the well-known Aphrodite of Melos (Fig. 172). It is usually in the round, although free relief is not unknown, a common example being the design on coins.

In many ways, the appreciation of sculpture is more difficult than that of either architecture or painting. It lacks the obvious practicality of the first nor does it lend itself as a medium to the complex arrangements whose cumulative force invests the second with a more immediate appeal than the restrained effects to which the sculptor is limited. Possibly because the earliest sculpture had a practical purpose, it appears to be more consistent in quality than that of today. In pré-historic times, the cave-man carved his weapons with images of animals and thus supposedly made them more effective in killing the prey upon which he depended for food. In Egypt and Greece, one of the chief duties of the sculptor was to create statues of the gods in human form, for the early religions of the world held the reverse of Christian belief to be true and made their gods in the image of Man. The religious function of sculpture is almost non-existent today in the Occidental world but in its place is an instinctive feeling that forms portrayed in indestructible stone or metal should be intrinsically worthy of the permanence thus acquired. The result of this feeling is that complete sculptural satisfaction

can rarely be found except in representations of the human form. Some sculptors have attained distinction by their animal figures, but even the best of their works lack the significance of the greatest sculptural realizations of the human figure. This fact also gives a clue to the inappropriateness in sculpture of many things which are quite justified in painting. Thus a picture of a man walking through a forest is perfectly legitimate whereas it would be ridiculous in sculpture as the displays in a wax-works museum so painfully reveal. This is less true of relief than of free-standing sculpture. None the less, the sculptor who strives for the varied naturalistic details, even in relief, that a painter can use without question, usually sacrifices some quality which is appropriate to his art.

There is a very fundamental reason for this. It is the necessity, which will be explained shortly, of keeping sculpture or painting from being merely an illusion of reality. In painting, this is accomplished by reducing the three dimensions of length, height and depth to the two of length and height, the third dimension being suggested but never actually present. Thus no painting can ever be so realistic that the observer feels he can see the back of a man's head by going around a portrait or the other side of a house from the rear of a landscape. On the other hand, if these same subjects are represented in sculpture, and for the moment relief sculpture which approximates painting in effect is not considered, the observer *can* see the other side and the figure tends to approach the illusion of reality that must be avoided. It must always be the *sculptured* figure that is seen, not a facsimile in metal or stone of the flesh and blood figure.

What qualities, then, must sculpture possess if it must not be merely naturalistic? The answer is the same as that which was given to the question "What constitutes great architecture?" The human figure is the raw material with which the sculptor works, just as the immediate function of the building is the point of departure for the architect. This raw material the sculptor treats in such a way that the statue becomes expressive of the things that he unconsciously feels about his subject, adding order and arrangement to it in such a fashion that the resultant form becomes harmonious with the spirit of his age. The greatness of the artist depends upon his ability to evolve in his statue the ideal form in which harmony of line, mass and surface reveal the true

meaning of his subject matter. The ideal of the sculptor is a formal order, based upon natural forms but with all accidental and temporal qualities eliminated so that in the end, the order of the sculptor is more perfect than that of Nature. For the observer, the value of a work of art lies in its clarification of his own experience of those forms and the heightened sense he derives from it of their actual meaning as forms, due to their being placed in a logical and coherent pattern. This furnishes another reason why naturalism is not enough to make a painting or a piece of sculpture a great work of art. The inclusion of all the accidental details only obscures the characteristic pattern of which they are a part. This is well illustrated by the soldiers on the average Civil War monument. The most prominent features are the buttons and insignia, the wrinkles of the coat, the sabre straps and the boot laces. The statue as a whole has no meaning other than a purely symbolic one for the sculptor has been so concerned with superficial details that he has not attempted to give them any formal meaning by establishing them as essential parts of a well-ordered pattern. The beauty of representational sculpture does not lie in its record of observation. It is rather in the organization which the sculptor imposes upon that record. Where such organization does not exist, as in the soldier of the Civil War monument, there is no beauty and no work of art.

Thus to the sculptor, the form of his model is not as significant or real as the form which he evolves in his statue. Just as merely fulfilling the immediate function in architecture is not enough to produce a great building, so mere representation of form in sculpture is insufficient to result in a great statue. It is the organization of the figure that is significant, a pattern of volumes indicated by planes and outlines, a pattern by means of which the inter-relationship of those volumes is emphasized and the ideal of the sculptor made tangible and apparent. For sculpture is primarily an art of form and mass, just as architecture is primarily an art of space. To the element of related forms, all others in sculpture are subservient and contributory.

In prehistoric times, sculpture was largely employed for magical and religious purposes. Its use as ornament for tools and weapons has already been mentioned. It is found on a larger scale in numerous statues that symbolized the gods in primitive worship by embodying the quality of which the particular deity being wor-

shipped was the sovereign. Thus in many feminine figures of the goddess of fertility, the breasts are very large and the hips broad, features indicating great adaptability to the function of motherhood. In these prehistoric statues, as in much art of primitive peoples today, representation is only incidental to the symbolic portrayal of the idea embodied in the figure.

It was in Egypt that a monumental sculptural style was first developed. Like Egyptian architecture, it was chiefly religious in character although secular subjects are not unknown. One of the chief functions of sculpture in Egypt was to provide figures in the tombs to which the souls of the deceased might return if the mummified bodies were destroyed. From the beginning, such figures had a naturalistic portrait quality which is not found in the more abstract statues symbolizing the gods. The statues of the Pharaohs which exist in great numbers were somewhat different in purpose and quality than the tomb figures inasmuch as they were often intended as images for worship and also for paying homage to the deeds of the rulers. The concept of the Pharaoh as a superhuman being who was the earthly representative of the gods required that his statue should be an ideal one without the accidental individualities that would betray an earthly origin. At the same time, it was also essential that there should be a certain portrait quality in the tomb statues and the great reliefs carved on the temple walls in order that the images should be associated with the proper monarch.

Many of these characteristics appear in the double statue of *Menkure and his Queen* (Fig. 143) in the Museum of Fine Arts in Boston. It is of hard stone, to which it probably owes its fine state of preservation, and was made between 3000 and 2500 B.C. It represents the Pharaoh who built the third of the great Pyramids at Gizeh, and his wife. The outstanding characteristic of the group is the rigidity of the figures. This is due to a convention observed by the sculptor known as the law of frontality. The figures are so represented that a straight vertical line through the center of each body would divide it symmetrically. The only movement is in the legs of the King and the Queen's rather naïve gesture of affection. The effect of these characteristics is a certain austere remoteness which was an essential part of the Egyptian conception of royalty. As sculpture, the group is notable for the pattern of volumes produced by emphasizing and relating the important parts of the bodies. They are unobscured by the

barely suggested draperies; the details of the hair, faces and limbs are conventionalized. The meaning or significance of the forms portrayed does not consist in the exactness with which they reproduce the model but by their relationship to each other in a unified pattern. That relation is achieved by the smoothly curved surfaces, by the continuous and flowing contours and by the compactness of the composition. The arms are attached to the bodies and the two figures are joined by a slab of stone. Both of these details were probably due to the sculptor's uncertainty of the strength of his material. Conventions such as these appeared very early in Egyptian sculpture and were hardly departed from throughout its entire duration as an independent art. Only for a brief period, in the rule of the iconoclast Ikhnaton, were they abandoned for more naturalistic methods.

Relief sculpture was used by the Egyptians as architectural decoration. In the temple at Abydos, there is a large relief portraying *Seti I making offering to the gods* (Fig. 144) in gratitude for a military victory.

It was carved about 1300 B.C. As in the group of Menkure and his Queen (Fig. 143), the naturalistic features of the body are represented according to certain conventions. One of these is typical of all archaic art when dealing with the human form in two dimensions, namely the portrayal of each part of the body in its most characteristic aspect. Thus although the head is in profile, the eye is represented as it appears from directly in front. The legs and hips are seen from the side but the shoulders are portrayed with the broadest plane to the spectator. This sculpture has a double purpose, to glorify the achievements of the Pharaoh and to decorate the



(Courtesy the Museum of Fine Arts, Boston)

FIG. 143.—MENKURE AND HIS QUEEN. MUSEUM OF FINE ARTS, BOSTON.

architecture. These considerations apply even to such details as the hieroglyphic inscriptions and the lotus blossom at the King's feet. In the figure itself, the curved outlines and smooth surfaces clarify the relationship of the different parts of the body just as in the earlier free-standing group. Another type of relief sculpture was also used by the Egyptians for architectural ornament. The figures



FIG. 144.—SETI I MAKING OFFERING TO THE GODS. ABYDOS.

do not project from the wall but are cut into it as on the pylon of the Temple at Philæ (Fig. 4). This "sunken relief" is peculiar to Egypt and is rarely found elsewhere. All forms of Egyptian sculpture, whether free-standing or relief, were originally colored. The figures often attained a heightened naturalism by this means, although that was not its purpose, the color being applied according to decorative conventions no less rigid than those of the sculpture itself.

CHAPTER XVII

GREEK SCULPTURE

OF ALL the visual arts, sculpture was the one best adapted to the embodiment of Greek thought. There are two reasons for this. The first is that sculpture is almost entirely limited in subject matter to the human form in which it parallels the restriction of Greek thought to matters pertaining to Man alone. The second reason for the intrinsic appropriateness of sculpture to the expression of Greek thought is that it is primarily an art of form. This, too, has a parallel in the anthropocentric philosophy of the Greek whose attitude toward knowledge is summed up in the assertion that Man is the measure of all things. This leads inevitably to the conclusion that the Real is that which can be grasped by the senses, the degree of its reality depending on the directness of its impact upon the human mind. From this it follows that to be convincingly real, an object must have convincing form. It is for this reason that Greek architecture, to digress for a moment, is almost totally devoid of any spatial implications. Space is intangible. It becomes real only as the result of an intuitive interpretation of immediate and direct sensory experience. The ideal quality of Greek architecture is a result of its objective and self-explanatory forms which actually represent a sculptural point of view, for Greek architecture, as has been pointed out before, is an art of pure form in which it partakes of the quality of sculpture. It was only when Greek thought broke its self-imposed restriction to human values and became conscious of other things that Greek art varied from the self-contained non-spatial forms with which it was exclusively concerned through the fifth century.

Greek sculpture was primarily religious in character. The deep-rooted human instinct that the gods can best be approached through an image representing them was responsible for this. In the Ægean civilization of Crete and Mycenæ, there was apparently little if any monumental sculpture, for religion in those times was very primitive and natural forms of trees and rocks, the Biblical

"stocks and stones," were worshipped. In the whole vast labyrinth which was the palace of King Minos at Knossos in Crete, the only religious symbol was a block of stone bearing a mystic monogram. A change occurred with the invasions of northern tribes between 1000 and 700 B.C., infusing new blood into the native

stock of the Mediterranean basin and bringing an anthropomorphic religion whose gods were represented in human form. With this background, Greek sculpture developed. It was not exclusively religious for many secular subjects were represented, particularly in later times, but the religious element was always the predominant one.



FIG. 145.—HERA OF SAMOS.
LOUVRE, PARIS.

A. THE ARCHAIC PERIOD

During the archaic period, which extended from about 625 B.C. to 480 B.C., the foundation was laid for Greek art in every field. This does not mean, however, that the art of the period does not possess value in its own right, in spite of the fact that the problems then posed did not reach complete solution until a subsequent period. In the archaic period, a number of basic types are found which continue through the greater part of the develop-

ment of Greek sculpture. Of these types, the two most important are the draped standing female figure and the nude standing male. An example of the first is the *Hera of Samos* (Fig. 145), so-called by virtue of having been dedicated to that goddess in the temple to her honor in Samos about 550 B.C. At first glance, the statue seems more like a stone tree-trunk than anything else, evidence of the still very primitive concept of the deity then prevailing in its resemblance to the earlier images of the "stocks

and stones" type. But a feeling of the necessity for a more human ideal led to the representation of toes at the bottom of the skirt and the suggestion of a torso as well as the portrayal of the arms, one of which is missing. Naturalistic representation was not the artist's intention, however. It was rather to effect a formal pattern in the firm and sweeping curves of the silhouette and the edge of the overgarment. The draperies also are a part of this design. They are stylized, that is the folds are not represented as they actually appeared but in a pattern of parallel lines which serve as a visual foil to the curves of the outline. At the same time, the sculptor was not unobservant of the more significant naturalistic details of the figure. This can be seen in the contrasted textures of the heavy overgarment and the lighter one underneath, the toes and the suggestion of breasts under the draperies.

The standing male nude type in Greek archaic sculpture is seen in the *Apollo of Melos* (Fig. 146). This type of figure constitutes the largest single class in archaic sculpture. All its representatives are known as "Apollos" although the type was used for other gods as well as to represent human beings. The entire group reveals characteristics that have been observed in Egyptian sculpture (Fig. 143), notably the law of frontality, the left leg slightly advanced, the broad shoulders and narrow waist and the clenched fists. This similarity was probably due to an actual connection between the two styles, the Egyptian having influenced the Greek. The greatest differences between them are the complete nudity of the Greek



FIG. 146.—APOLLO OF MELOS. NATIONAL MUSEUM, ATHENS.

figure and the absence of the supporting slab which Egyptian sculptors deemed essential to stability. Instead of the drapery pattern of parallel lines seen in the Hera of Samos (Fig. 145), the body itself is made into a pattern. The chest, abdomen and groin are indicated by stylized planes suggesting the rounded surfaces. The heavy muscle of the lower abdomen is indicated by a projecting ridge from the hip to the genitals. The head is conventionalized, the muscles of the cheeks and lips being reduced to smooth planes, the eyes bulging from their shallow sockets and the thin lips turned up at the corners in the curious "archaic smile" which was the sculptor's only way of giving expression to the face. The hair is also treated in a conventional manner as a series of regular curls falling down the back, its bulk giving needed strength to the neck. The net result is a figure which has decorative unity arising from simplification of the large complex forms of the body. Its stiffness reveals quite clearly that the sculptor did not fully understand the complex mechanism of the human body. None the less, he did realize the organic unity of the body as a whole and gave the necessary emphasis to the formal relations between its various parts that make for coherence. He did not relate those parts in the statue as they are in a living model, but he imposed a relationship upon them which is quite as tangible as in the model. He thus created a reality analogous in general form to the human body but differing from it in certain features of order and arrangement lacking in the other. From his knowledge of the human figure, limited though it was, he evolved a conception of it which has life and vigor in its own right.

The rapid development of Greek sculpture was due to a far-reaching and lively curiosity about the human figure which extended to all its aspects and attributes. A number of figures reveal an attempt to suggest movement, an example being the *Victory of Delos* (Fig. 147) which was carved about 560 B.C. A conventionalized pose was evolved in which the kneeling legs are seen in profile while the upper part of the body and the outstretched arms are full face. As in the Hera and the Apollo the form of the figure is determined by decorative considerations. It is an akroterion or figure surmounting the gable of a temple. The incised lines indicating the folds of the skirt are curved to suggest movement.

The upper torso is stylized, reduced to the principal volumes of shoulders, breasts and upper abdomen. The face with its projecting cheek bones, bulging eyes and archaic smile is similarly stylized. As in the Apollo of Melos, the hair is treated as a mass of ringlets in long curls hanging down over the shoulders and reinforcing the neck.

Archaic sculpture was not limited to free-standing figures but also employed relief, chiefly as architectural decoration. About 550 B.C., the metopes of a temple at Selinunte in Sicily were carved with various mythological subjects, one of them being *Perseus slaying the Medusa* while Athena looks on (Fig. 148). As in the Egyptian relief of Seti I (Fig. 144), the lower part of each figure appears in profile and the upper part in full face. The figures themselves are rather heavy and squat, the dull faces lacking even the animation of the conventional archaic smile. Naturalistic details are stylized, notably the muscles of the calves and the hair. The problem in decorative sculpture of this type is to achieve an integration of its design

with that of the architecture. With this end in view, the principal accents of the design are vertical to agree with the flanking triglyphs. Crowding the figures into the available space resulted in Perseus' right arm and the Medusa's left leg both being shorter than their counterparts. The kneeling Medusa reproduces the type of the Delos Victory (Fig. 147).

To the average observer of today who is accustomed to a naturalistic type of representation, the beauty of archaic sculpture is somewhat difficult to perceive. None the less, it is quite considerable. From an historic point of view, it is significant as the



FIG. 147.—VICTORY OF DELOS.
NATIONAL MUSEUM, ATHENS.

beginning of a sculptural tradition which is often considered, and not without some justification, as the greatest that ever existed. On the broadest esthetic grounds, it reveals the most vital characteristic of artistic creation, the imposition of rhythm and order upon the chaotic material of human experience. Furthermore, it



FIG. 148.—PERSEUS AND MEDUSA. MUSEUM, PALERMO.

possesses to a high degree the essentially sculptural quality of form. It is impossible to see a good archaic statue without sensing this; its mass and weight, the shape of limbs and torso, the texture of the material are all impressed upon the observer. The statue creates a desire on his part to feel and handle it, to experience tactually the projection of the modelling and the planes of the surface. As an art of form, this is a test of sculptural quality

in any style or period and one which proves the intrinsic greatness of much archaic art.

Toward the end of the archaic period, a more naturalistic style became possible by virtue of more extensive observation of the human body. The *Statue dedicated by Euthydikos* (Fig. 149) was excavated from the debris used to level off the Athenian Acropolis after the city had been sacked by the Persians in 480 B.C. Carved between 490 and 480 B.C., it was probably dedicated to Athena. It is evident in the figure that advances had been made in naturalistic observation since the time when the Delian Victory (Fig. 147) was carved. This is particularly true of the way the head is represented. The eye socket is deeper, the upper lid has definite thickness and seems to cover the eyeball instead of being just an incised line on its surface. The lips curve down at the ends instead of up and give the face an expression of sullen willfulness. Certain archaic conventions persist, however. The hair is stylized in waves which fall over the shoulders and the drapery is indicated by straight parallel lines. The upper arm is attached to the body as in earlier work. Even in the head which appears more naturalistic in the rendition of the planes of the face, the contours of mouth and eyes are unbroken and the sides of the nose are continued upward in a well-defined line and turned out to indicate the intersection of brow and eye socket. All of these details are purely decorative conventions that were retained in spite of the close observation of natural appearance evident in the treatment of the lips and eyes. Doubtless they were less obtrusive when the figure had its original



FIG. 149.—STATUE DEDICATED BY EUTHYDIKOS. ACROPOLIS MUSEUM, ATHENS.

painting for it was colored as were the majority of Greek statues. Traces of polychrome ornament are still visible on the Euthydikos figure and on the metope from Selinunte (Fig. 148).

The climax of the archaic style in Greek sculpture appears in two groups of figures dating from about 480 B.C. which once occupied the pediments of the temple of Aphaia at Ægina. Each group represented a battle, and probably portrayed an incident from the Trojan War. A *Dying Warrior* from the eastern one (Fig. 150) reveals even more than the figure by Euthydikos the considerable degree of knowledge concerning the structure of the human body at the very close of the archaic period. The law of

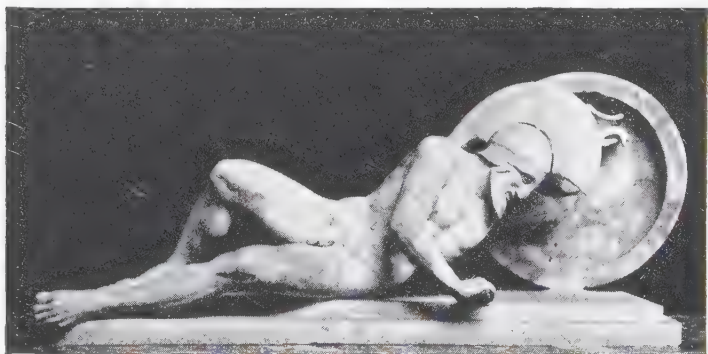


FIG. 150.—FALLEN WARRIOR FROM ÆGINA. GLYPTOTHEK, MUNICH.

frontality has been discarded and free movement on both sides of the main axis of the figure and in either direction is possible. The muscles are well represented though they appear rather hard, as they would be in the athletic type of figure upon which the sculptor based his ideal. The greatest degree of naturalism in the statue is seen in the accurately observed proportions of the body and the details of muscular and bony structure. In the head, a number of archaic conventions are still visible. The rounded planes of the brow and nose are flattened out, intersecting in a sharp ridge. The beard is portrayed by a sharp angular projection on which wavy incisions indicate the hair. The archaic smile also persists, but it is modified by the shadow of the short mustache to become an appropriate grimace of pain. Naturalistic though many of the details of the figure are, it possesses great

decorative unity. The sweeping curves of the lower side of the body create this unity, establishing a rhythm that begins slowly in the slight curve of the leg, becomes more rapid in the body to culminate in the half circle of the helmet and comes to a final close in the disk of the shield. The decorative rhythm of this progression of curves is accented by the straight lines and angular silhouette of the upper edge of the body.

The archaic statues that have been considered all demonstrate the tendency in Greek art to eliminate considerations of space. In the very earliest statues such as the Victory of Delos (Fig. 147) the thickness of the figure is obviously controlled by that of the block from which it was carved. The sculptor was thus considerably hampered in the dimension of depth so he practically eliminated it and designed his figure to be seen only from the front. In later figures, such as the Apollo of Melos (Fig. 146) and the Ægina Warrior (Fig. 150) the rounding off of the legs and arms in the interests of more naturalistic representation is utilized by the sculptor to create a sense of the third dimension but only insofar as it emphasizes the mass of the figures. Furthermore, this effect is apparent only if the figures are viewed from directly in front; from an angle it is hardly perceptible. This goes to show how similar the methods of sculpture and architecture were in the Greek world. Both are based on a conception of form that is two-dimensional, involving a simplification of space carried to the point of eliminating it. It is by this simplification that the Greek sculptor succeeds in emphasizing the mass and volume of his figures and thus invests them with the grandeur and impressiveness apparent even in the very earliest works.

By the end of the archaic period, the ideal of Greek sculpture was one characterized by a considerable degree of naturalism, even though it was still expressed by means of many inflexible conventions. In subsequent periods, these conventions disappear to some extent to be replaced by others based on closer observation of nature but none the less conventional for that. In the Ægina sculptures, the change has already begun to take place as far as the body is concerned even though the general impression is one of over-hardness. In the period subsequent to the archaic, known as the transitional one, this change extends to the face and head as well as to the general proportions of the entire figure.

B. THE TRANSITIONAL PERIOD

The transitional period in Greek sculpture began about 480 B.C. and is generally considered to have lasted until 450 B.C. when the

Golden Age of Greek art began. The term transitional can be used in reference to this period only with certain reservations for it implies that the art of that time is chiefly important as a connecting link between the archaic style and that of the Golden Age. This is not the case, for transitional sculpture reveals an originality of conception and a quality of execution which is equal to that of any other time in forcefulness of expression.

A notable example of transitional sculpture is the bronze *Delphi Charioteer* (Fig. 151) which dates from about 475 B.C. The statue is life size and was part of a group consisting of chariot, driver and horses which commemorated a chariot race victory. Although it was erected in honor of the accomplishment of one man, it is not a portrait in the exact sense of the term. Rather it embodies the type of aristocratic youth that took part in the athletic contests of the day. It is also typical rather than representative in



FIG. 151.—BRONZE CHARIOTEER,
MUSEUM, DELPHI.

not showing the figure in the rapid movement of the race itself but standing calmly in the chariot holding the reins. In the construction of the head, there is a closer approximation to actuality than has appeared hitherto. The resulting realistic effect is height-

ened by the colored eyeballs and the silver teeth seen between the slightly opened lips. The feet and the arm are also portrayed very naturalistically, as compared with archaic works. This naturalism does not detract, however, from the unified design of the figure as a whole that resides in the organically related volumes of the body and the decorative pattern of hair and draperies. At first glance, the latter seem to be in regular unvarying folds but they are actually very subtly distinguished from each other to give interest to the pattern without destroying its simplicity. There is still no effort to reveal the body underneath the draperies. Both exist as separate entities although the long robe seems to envelop



FIG. 152.—PEDIMENTAL GROUPS OF THE TEMPLE OF ZEUS AT OLYMPIA, RESTORED.

the body in contrast to the tightly stretched sheaths that represent garments in the archaic style (Fig. 147).

The largest single body of transitional sculpture now existent is that which once decorated the temple of Zeus at Olympia, finished about 460 B.C.; it includes a number of figures from the pediments and several metopes. In the *Pediments* (Fig. 152), there was a problem in arrangement as well as in execution of the individual figures, namely to relate them in such a way that the group would fit naturally in the flat triangular space of the pediment both as to subject and the size of the figures. The Olympia sculptors solved this problem by making a god the central figure in each pediment, Zeus in the eastern one, which is above in the illustration, and Apollo in the western one. As divinities, they are larger than the mortals around them and are thus appropriately placed in the middle of the pediment both from the point of view

of design and of the subject matter. They appear as arbiters of the contests represented; the eastern pediment is the scene of preparation for the chariot race between Pelops and Enomaus that was to decide the fate of the former as a suitor for Hippodamia, the latter's daughter; in the western one is the legendary battle between the Lapiths and the Centaurs. At the extreme ends of the pediments are reclining figures. In the eastern one, they symbolize the two rivers Alpheios and Kladeos which bounded the area in which the chariot race was run. In the western pediment there are reclining feminine figures in the angles representing spectators. Between the two groups, there is a contrast in action, one being quiet and the other violently animated, which is standard in subsequent examples of pedimental decoration. In both of those at Olympia, the design as a whole is rather obviously symmetrical with a central figure and those on either side balancing each other in pose and action. None the less, the individual groups are well related to each other to form a unified whole, particularly in the western pediment where the calm figure of Apollo in the center and the passively reclining ones in the ends effectively stabilize the movement of the struggling groups.

The *Apollo from the Western Pediment* (Fig. 153) continues the standing nude male type of the archaic period (Fig. 146) but with certain changes. Where the pose of the archaic figure is mechanically exact, there is variety and elasticity in the transitional one, the weight resting on the right leg while the left one is partially relaxed, but without compromising its firmness at all. The Olympian Apollo also reveals a more extended observation of the muscular structure of the torso than was apparent even in the most advanced archaic work (Fig. 150). An athletic ideal is embodied in both the Æginetan and Olympian figures, but the sculptor of the latter avoided the exaggerated hardness which makes the body of the earlier figure resemble a tanned hide over strips of leather instead of firm flesh covering well-developed muscles. It is the latter effect which the sculptor of the Apollo succeeded in obtaining, particularly in the arms, the breast and in the horizontal bands of muscle across the upper abdomen. It also appears in the head in spite of archaic formalisms in the ringlets of hair, the protruding eyeballs and the unbroken contour of the eyelids. The planes of the cheeks and mouth merge into each other and the hard intersection of the forehead and eye socket, charac-

teristic of archaic work, has been softened. The draperies over the right shoulder and left forearm lie in naturalistic folds although the broad planes and the sharp lines of the edges suggest the earlier, more stylized methods. There is still something of the old rigidity but it is due here to the architectonic nature of the figure and is an important feature of the pattern that welds the de-



FIG. 153.—APOLLO FROM THE WESTERN PEDIMENT, MUSEUM, OLYMPIA.

tails with their incidental naturalism into integral parts of a larger scheme. There are certain conventions that appear in addition to those mentioned above, notably the emphasis on the band of muscle that marks the lower edge of the abdomen and the continuation of the forehead line in the nose. The former is a characteristic that can be observed in well-developed athletic figures and is hence a naturalistic convention while the latter was adopted quite early by the Greeks as an arbitrary feature of beauty.

From the eastern pediment at Olympia, the figure symbolizing the river *Alpheios* (Fig. 154) also brings out the increasing naturalism evident in the transitional period. It is almost identical in pose with the Dying Warrior from Aegina (Fig. 150) but the details reveal many points of difference. The breast muscles are rendered as soft and pliant masses in the Olympia figure rather than as dry, hard lumps. There is also a suggestion that the muscles of the left side are more strained than those of the right, a characteristic not found in the earlier figure. In both, the long curves



FIG. 154.—THE RIVER ALPHEIOS FROM THE EASTERN PEDIMENT.
MUSEUM, OLYMPIA.

of the lower side of the body are contrasted with the straight lines forming angles of the upper side, but this contrast is not as obvious in the transitional work. The ideal of the sculptor was a more naturalistic one than in the earlier period, and abstract design not so emphasized.

The sculptural decoration of the temple of Zeus at Olympia included twelve carved metopes, six of which were placed over the entrance at either end of the cella. They represented the twelve labors of Heracles and were very similar in style to the pediment sculptures although probably a little earlier in date. One of those labors involved obtaining the golden apples of the Hesperides

which could be done only with the aid of Atlas, the giant who supported the firmament on his shoulders. The metope sculpture represents *Heracles, Atlas and Athena* (Fig. 155); Heracles bows under the weight of the world indicated by the architectural entablature above the frieze, taking the place of Atlas while the latter obtained the golden apples which he is shown holding out to the hero. Athena stands behind Heracles and relieves the weight on his shoulders. As in the pediment groups, the design is architectonic, the paramount consideration being its decorative relation-



FIG. 155.—HERACLES, ATLAS AND ATHENA. MUSEUM, OLYMPIA.

ship to the architecture. The three erect figures repeat the vertical accents of the colonnade below and of the flanking triglyphs. The modelling is direct and straightforward without many details as most of these were painted on the figures instead of being carved. Again comparison with an archaic work such as the metope from Selinunte (Fig. 148) will reveal the more extensive observation of naturalistic details that characterizes transitional sculpture. The male figures are portrayed in full profile, even to the eyes which are no longer shown in the front view but are almost correctly foreshortened. The male heads are angular and somewhat archaic in form, but that of Athena has a rounded softness that anticipates

the style of the Golden Age. Very notable is the masterly design of the figures themselves in which broad planes and sharp contours articulate the masses of torso, limbs and head into a unified whole. The drapery of the female figure seems almost naturalistic yet its straight ordered folds are marvelously simple in arrangement, the realistic effect arising from subtle variations in the details.

The most immediately apparent difference between archaic and transitional sculpture is in the technique of representation which is much more naturalistic in the later period although still highly conventionalized. Less obvious but of equal importance is the intellectual or spiritual content of the figures. In the archaic period, the sculptor was chiefly concerned with problems of bodily structure and appearance; the content of his figures is born of his effort to express his ideas by a relatively limited technique. In the transitional period, the technical difficulties that beset the earlier sculptor were no longer so numerous, many of them having disappeared with more extended and closer observation of the human figure. But with this increased knowledge, there also came a need for more than a mere approximation of the appearance of the body. To satisfy this need, the transitional sculptor made a definite attempt to suggest personality. In the Olympian Apollo, the elevation of the god above the struggling groups around him conveys his superiority to mortal beings. The Delphi Charioteer likewise stands oblivious of the excitement and turmoil of the race just run. The ideal unity of personality thus suggested is reinforced by the ideal unity of space, which makes each figure complete in itself even though part of a group and the ideal unity of time that is achieved by representing action at a moment immediately before or after the one of greatest activity. In the Charioteer, it is that just after the conclusion of the race; in the east pediment group at Olympia, it is the one just before the race begins. Even subjects which are entirely in terms of movement such as the Discus Thrower, which is a well-known example of transitional sculpture, the instant portrayed is that in which opposing forces are balanced. In each case, the aim of the artist was to suggest both previous and subsequent action and thus attain an ideal unity of time.

With the attainment of an ideally unified time, space and personality in transitional sculpture, there came a seriousness of expression and bearing. The Olympian Apollo is aloof and dignified, above the petty dissensions of humanity yet conscious of

the importance of his position as arbiter. It is this realization of a profound inner meaning that is the most vital point of difference between transitional and archaic figures. The latter (Fig. 146) are brisk and sprightly, their faces animated by the archaic smile; the former are heavier and almost sombre in expression. In the prevailing tenseness of the archaic figure, there is an impression of an organism almost mechanical in function; in the transitional figure, the balance of contracted and relaxed muscles suggests an inner will that controls the mechanism. The more naturalistic details of the body thus acquire greater meaning in that they appear to be the instruments of an actual mind. The whole statue thus embodies a conception which attains monumental effect in the large, simple, well-ordered pattern of volumes that makes the conception objective and tangible. It remained only for the Golden Age to give it even greater power by making it abstract.

C. THE GOLDEN AGE

During the Golden Age of Greece from 450 to 400 B.C., the ideals that are only suggested in the art and thought of the archaic and transitional periods were attained. The architectural ideal is embodied in the Parthenon, the Erechtheum and the Propylæa, all on the Acropolis of Athens. In literature, the great tragedies of Sophocles and Euripides were written then. In sculpture, Polykleitos and Pheidias produced their masterpieces. Architecture, drama and sculpture all reveal a matured concept of life, a philosophy that had been formed and tested. In the Golden Age, the Greek of Athens was sure of himself because the traditions of his race had been firmly established as valid and significant. The artistic expression of those traditions was thus completely integrated and in that integration lies the explanation of its greatness.

In the development from archaic through transitional sculpture, the changes that have been observed show the general trend to have been toward an ideal that was at once naturalistic and abstract. In the Golden Age, that ideal was attained. In a statue by Polykleitos of an athlete carrying a spear (Fig. 156), which is known as the *Doryphoros* or Spearbearer from the action, it is evident that the sculptor of the Golden Age had mastered the representation of the human figure. The pose, in which the weight rests entirely on the right leg while the left one is relaxed, is that

of taking a forward step and results from emphasizing the slight variation between the two legs that is apparent in the Olympian Apollo (Fig. 153). The arms are also differentiated, the right one being inactive while the left holds the spear. The head is turned



FIG. 156.—THE DORYPHOROS.
NATIONAL MUSEUM, NAPLES.

slightly to the right, the contour of the skull being revealed by the tight, closely adhering ringlets of hair. The deep eye-sockets enclose the eyeballs and the upper lids overlap the lower ones at the outer end instead of forming an unbroken contour. These details together with others such as the indication of the muscles and veins show an extensive and rather accurate knowledge of human anatomy.

The muscles are well developed as would be expected in a statue of an athlete, although their prominence may be due to the fact that the Doryphoros as here represented is not the original but a Roman copy. It is from such copies that most of what is known today about the great Greek sculptors is derived, the originals having long since disappeared. These copies vary in quality, depending upon the skill of the copyist, but at best they are only approximations of the originals. According to contemporary descriptions, this

copy of the Doryphoros, which was found in the palæstra or athletic field at Pompeii and is now in the Naples Museum, reproduces the principal characteristics of Polykleitos' figure though some details, such as the muscles, bear traces of the Roman style. The conventional heavy band below the abdomen is very prominent and also the breast muscles. Throughout, the

form of the muscles is well observed and properly related to the movement of the body. To this relationship is due, in part at least, the impression of life in the statue. Even more does it come from the design as a whole. The right leg and arm are both straight, but the arm hangs limp while the leg plays a functional part in sustaining the weight of the body. On the left side, both arm and leg are bent but there it is the arm which is functional. The rhythm of this balanced cross-relationship of tense and relaxed muscles is emphasized by the contrast between the lowered shoulder on the right side and the slightly raised left one. The result is to suggest that the figure has perfect freedom of movement. At the same time, its poise is assured for the center of balance of the figure as a whole lies within its own mass, the vertical axis that indicates it passing along the inner side of the right leg.

In the Doryphoros, it is evident that many of the problems of naturalistic representation of the human figure had been solved. The increased knowledge of bodily structure that made this possible brought with it not only greater realism but also an intensified awareness of the ideal requirements of a work of art. This was set forth by Polykleitos in a book called *The Canon* or rule in which he gave the proportions of the Doryphoros as those of the ideal male figure. Characteristically enough, these proportions are based on mathematical relationship, just as in the Doric temple. Thus in addition to the organic connection between the different parts of the body and the general solidness and sense of weight, the bodily elements are commensurates of a mathematical ratio. The head is one-seventh the height of the whole body, a heavier proportion than in either archaic or transitional figures where the ratio was one to ten and one to eight respectively. Similarly, the sizes of all the details are determined by a fixed ratio, the unit being one of those details, such as a finger or a hand.

The main characteristics of fifth century sculpture of the Golden Age appear in the Doryphoros; but as a Roman copy, it stands to reason that its effect must vary to some extent from that of the original. One thing which the copyist introduced, for example, is the tree stump beside the right leg. This he was forced to do for the sake of strengthening the statue which is of marble. Without it, the legs of brittle stone would have broken under the weight of the body. This same consideration made him insert the bar between the right arm and the hip. The heavy muscles

have already been mentioned as a possible exaggeration by the copyist. It is manifestly impossible through such examples to judge the full effect of the style of the Golden Age for which originals must be had.

The most impressive Greek originals of the Golden Age are the sculptures which were once on the Parthenon in Athens. There were groups in both pediments (Fig. 6), a continuous frieze around the outside of the cella wall and figures in high relief on each metope. The pediment figures were probably carved between 438 and 433 B.C., the others being a little earlier. The subjects of all the sculptures were related in some way to Athena, to whom the Parthenon was dedicated. The east pediment represented her birth and the western one her contest with Poseidon for the sponsorship of the city of Athens. The frieze portrayed the Panathenaic Procession which ascended the rocky slopes of the Acropolis once every four years as a part of the ceremonies attendant upon the renewal of the sacred peplos or robe which enshrouded the great ivory and gold statue of Athena in the cella and which was woven by the maidens of the city. The metopes were devoted to various mythological subjects, combats between gods and giants, Greeks and Amazons and Lapiths and Centaurs. Very little of this sculpture remains on the Parthenon, most of it having been placed in the British Museum by Lord Elgin. Many of the figures were badly damaged by the explosion that nearly demolished the building in 1687 and attempts previous to Lord Elgin's to lower the pediment sculptures resulted in irreparable damage to them.

The mind that conceived the decoration of the Parthenon was that of Pheidias, an artist whose genius was recognized by nearly all the writers of ancient times. Under his direction, the embellishment of Athens took place between 449 and 434 B.C. to which purpose the funds of the Athenian Naval Confederacy had been diverted by Pericles. His was the ruling spirit in the multitude of artists including Iktinos and Kallikrates, the architects of the Parthenon, and the numerous sculptors who actually carved the figures that decorated it. A noted sculptor himself, Pheidias' contribution to the sculptured ornament of the Parthenon was apparently only the ivory and gold statue of Athena that stood in the cella, but there can be no doubt that the conception of every figure on the building was his even if he did not execute them with his own hands.

In the eastern pediment was a group representing the birth of Athena. As in the Olympia group of the chariot race, setting and time were indicated by symbolic figures, the event taking place at dawn on Mount Olympus. At the left end of the pediment, the horses of the sun rise out of the ocean as those of the setting moon sink below the waves at the right end. Immediately beside the horses of the sun is a reclining male figure (Fig. 157) which is usually known as Theseus, the Athenian hero, but more plausibly

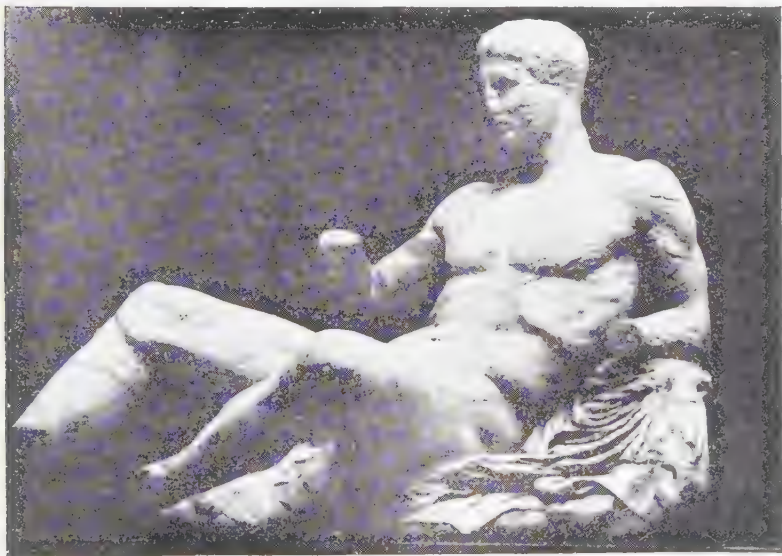


FIG. 157.—MOUNT OLYMPUS FROM THE EASTERN PEDIMENT OF THE PARTHENON. BRITISH MUSEUM, LONDON.

identified as a symbol of *Mount Olympus*, the dwelling place of the gods, lighted by the rays of the rising sun. In this figure is summed up all that had been achieved by earlier periods in the representation of the male body. The muscles are portrayed by the Polykleitan conventions as in the three horizontal bands across the breast, stomach and abdomen. However, the muscles of Polykleitos' figures are somewhat dry and exaggerated as is natural in an athletic type. In the Mount Olympus, the muscles are clearly indicated, their function well understood but the overstatement noticeable in the earlier styles is avoided. They are

pliant and flexible; the skin and the firm, resilient flesh have definite thickness instead of being hard and thin like a tanned hide. The ideal portrayed is that of a perfectly developed man in contrast to the Polykleitan concept which is that of a perfectly trained athlete. The figure is seated on a stone covered with a drapery that falls in highly naturalistic folds; its well-suggested texture forms a fine contrast with the smooth firm flesh of the man. The head, in spite of its damaged condition, reveals many of the same characteristics observed in the Doryphoros. Its proportion to the total height of the body is about one to seven. The hair clings closely to the skull, clearly revealing its contour and emphasizing its mass. The nose continues the line of the brow according to the Greek concept of beauty. The eye rests in its socket and the upper lid slightly overlaps the lower one at the outer end. As in the body, the modelling of the planes of the cheek and mouth is realistic without being merely representative. Again there is a carefully studied balance of movement resulting in a state of perfect poise. The facial expression is quiet and impersonal for in fifth century Greek art, the face and head were not emphasized as expressive elements but were considered as contributory to an effect created by the entire body. The sense of serene repose in the Mount Olympus comes from the figure as a whole and would be as powerful even if the head were missing.

The three female figures on the right side of the east pediment of the Parthenon (Fig. 158) bear out the generalization concerning the Mount Olympus. They represent the *Three Fates* who were believed by the Greeks to be present at every birth. All the heads are missing, yet it is doubtful if their presence would have made the figures any more impressive for, as in most Greek art, the concept of the whole is implied in the rhythms of the part. There is a carefully studied contrast of movement in the group; the figure to the left is about to rise; the middle one has just turned toward her and the third is still in complete repose. This movement is a factor in the composition of the pediment group as a whole, a movement which relates the outer figures to the central group of Zeus and Athena. It does not detract in the slightest from the compactness of the group itself or the unity of the individual figures. This last is due to two factors, the lofty conception of the figures themselves as physical entities and the complete harmony between that conception and the arrangement

of the draperies. These are in many folds and at first glance seem very naturalistic but examination will reveal them to have been disposed in a very subtle pattern. This is formed by the numerous folds and is of great interest in its own right but is none the less subordinated to the bodies underneath. This is seen in the way that the simplicity or complexity of the folds is determined by the functional importance of the part of the body covered. Over the legs, the folds are broad, giving way to smooth planes over the knees and becoming quite involved over the thighs and abdomen. The breasts are indicated by plain surfaces in contrast to the swirls between them. The forms themselves are never ob-



FIG. 158.—THREE FATES FROM THE EASTERN PEDIMENT OF THE PARTHENON. BRITISH MUSEUM, LONDON.

scured by the drapery but rather are made more clear through them, just as a subordinate theme played in counterpoint against a major one in a Bach fugue results in their mutual enrichment. In addition to their function of clarifying the structure of the figures, the draperies also serve to establish the three-dimensional volumes of the bodies, their curved lines leading inevitably to a sense of definite and solid mass underneath. The whole group is a masterpiece of effective detail, handled in such a way that it gives character and weight to a broad and comprehensive idea without losing its own individuality.

And what of the bodies themselves? A famous sculptor is reported to have said when he first saw the Three Fates, "They look as if they were modelled on human bodies, but where is one to find such bodies?" This was just the impression the sculptor wished to give, of beings in human form but without the individual and

accidental imperfections that characterize mortal bodies. If the gods can be represented as humans, they must have forms of surpassing beauty, idealized. This the Parthenon sculptor realized and his statues of the gods represent an ideal of the human figure which could exist only in the minds of men, never in mortal flesh. It was for this reason that the critics of antiquity called Polykleitos the sculptor of men and Pheidias the sculptor of gods, for in the figures of the latter, they beheld the embodiment of all the characteristics of the perfect physical beauty which they imagined the gods to possess.

Even in their present condition, the figures of the Three Fates convey the impression of sublime repose that characterizes all the great sculptures of the Golden Age. The heads doubtless contributed to this impression originally. While no original by Pheidias exists to prove this, a marble head copied from that of a bronze statue by Pheidias, known as the *Athena Lemnia* (Fig. 159), gives weight to such a supposition. The original figure was erected on the Athenian Acropolis as a memorial by the colony from Lemnos. That it was celebrated for its beauty in classic antiquity is indicated by a passage in Lucian praising it particularly for the outline of the head, the delicate modelling of the cheeks and the finely proportioned nose. All of these characteristics appear in the marble head, which is in the Municipal Museum at Bologna in Italy, even though it is a Roman copy. The details of construction are similar to those of the Mount Olympus from the east pediment of the Parthenon. The austere expression is an integral part of the classic ideal embodied in the figure. In its impersonality, there is something of the same sense of powerful, abstract force that is evident in the Parthenon and informs the lines of Sophocles' *Œdipus Rex* with such awful meaning.

Returning now to the sculpture of the Parthenon itself, the style of the metopes is somewhat less advanced than that of the pediment figures. They were executed at an earlier date, probably having been begun at the same time as the building itself in 448 B.C. The example illustrated (Fig. 160) is from those on the south side and represents a *Lapith battling a Centaur*. The figures are rather dry and hard, the style being one that would be expected in men trained in the manner of the transitional period. These characteristics are seen chiefly in the treatment of the muscles for the head of the Lapith is not unlike that of the Mount Olympus



FIG. 159—HEAD OF THE ATHENA LEMNIA. MUSEO CIVICO, BOLOGNA

(Fig. 157) in the east pediment. The designs of the best metopes represent a considerable advance over the somewhat inelastic formulas employed for similar purposes in earlier periods. The violent action of the figures is kept within the limits of the metope space by the vertical left arm of the Lapith and the emphatic curve of the Centaur's rump. The figures are so arranged as to make balanced geometrical forms which clarify the relationship between them. Such is the purpose of the parallel between the outstretched arms and the angle formed by the Lapith's



FIG. 160.—LAPITH BATTLING A CENTAUR. METOPE FROM THE PARTHENON. BRITISH MUSEUM, LONDON.

right leg to support the Centaur's weight. The relief is high in order that the figures might not be overwhelmed by the massive architectural setting and that they might readily be seen from the ground.

The frieze that once surrounded the outside of the cella was probably carved between 442 and 438 B.C. The greater part of it was removed by Lord Elgin when the pediment figures were taken down and is now in the British Museum in London. It represents the Panathenaic Procession. The frieze begins over the west end of the cella with a group of horsemen and charioteers, the victors in the Panathenaic Games that were a part of the ceremony. The procession moves eastward along the sides. The rulers

of the city, priests and musicians, and the sacrificial animals appear in different groups. Over the east end of the cella are the maidens who wove the peplos, the magistrates and seated figures representing the gods.

The frieze is carved in low relief (Fig. 161), the figures projecting much farther from the background at the top of the band than at the bottom. This was necessary because they were illuminated from below by light which came through the peristyle, and the



FIG. 161.—SLAB FROM THE PARTHENON FRIEZE.
PARTHENON, ATHENS.

lower part of the frieze projected less than the upper part in order not to cast obscuring shadows on it. In the illustration, the lighting is incorrect as it is from above, thus creating an effect quite different from the one intended, for certain details are over-prominent, such as the veins of the horse's belly. The maximum projection of the objects represented is not more than about two and one-quarter inches, yet there is a pronounced effect of depth. It is sufficient, for example, to make the spatial relationship of the horse and the man behind it quite plausible. This was managed by carving the relief in a series of receding planes which are not parallel with themselves and the background but are cut at very

slight angles to each other. This refinement is so slight as to be hardly perceptible yet combined with the extraordinarily delicate modelling of the figures, it serves to establish them as three-dimensional forms which seem to have a depth much greater than the actual few inches.

Another characteristic of the frieze is the uniform level of the heads throughout, whether the figures are standing or seated. This principle of design is known as *isocephalism* and it is invoked here as an architecturally decorative requirement. The figures on horseback are thus smaller than the standing ones but so well is the frieze as a whole composed and so convincing is each figure in itself that the disparities in size are not at all prominent. In the same way, the smallness of the horses in relationship to the human figures is hardly noticed in the effect of the frieze as a whole.

The date of the frieze midway between the metopes and the pediment figures explains the style which is somewhat more advanced than the former and less so than the latter. Nor is it uniform throughout, suggesting that a number of sculptors worked on it. They were probably men of lesser talent than those who executed the more prominent pediment figures and the style is definitely related to that of the preceding period. The figure to the left (Fig. 161) is reminiscent of the Polykleitan Canon in pose but the modelling of the muscles is rather hard and the abdominal convention quite prominent. The somewhat exaggerated swing of the hips reveals the hand of an imitator of Polykleitos rather than a sculptor who was his equal in originality. The two figures to the right show an archaic persistence in the full-front view of the eye in a profile head. There are some very naturalistic details such as the rough beard stubble on the older man's face, the veins on the stomach and legs of the horse and the indication of leg muscles in the figure to the left.

The naturalistic details that occur in the figures of frieze might lead to the conclusion that the aim of the entire work was to achieve a photographically realistic portrayal of the procession. This could not have been the case, however, for there is no reference anywhere in it to the impressive setting in which it took place. The background is quite plain although it would seem to have been quite appropriate to represent the Acropolis itself and the various buildings on it in order to identify the event. This would

have been directly contrary to the wish of the designer, however, whose intention was to create an ideal representation of the ceremony by which the city paid homage to its divine patroness rather than a concrete and specific illustration of it.

Even in portraiture which would logically be considered as one form of art in which specific and realistic elements should predominate, the Greek did not vary from the impersonal idealism of the Parthenon sculptures. When Kresilas created a portrait of *Pericles* (Fig. 162), the result was not a record in bronze of the way the great Athenian statesman actually looked, even though certain personal traits are suggested such as the slight tilt of the head and the full sensuous lips. The statue is rather an ideal embodiment of the powerful personality that made Athens the foremost city of the Greek world for a few brief years in the fifth century. The original bronze figure no longer exists but there are several copies in stone such as the one illustrated which is in the British Museum in London. Although *Pericles* was well past middle age when the portrait was made, about 440 B.C., the creases and wrinkles that would normally appear in the face are absent. Such individual accidents of appearance were omitted by the artist in order to emphasize the ideal qualities he wished to suggest. It is not a portrait of *Pericles* the man as much as it is the representation in marble of *Pericles* the statesman. The idea for which he stood was more important to the sculptor than the incidental facts of the way he looked.

The impersonal idealism seen in the Parthenon sculptures and the portrait of *Pericles* is the outstanding characteristic of sculpture during the Golden Age. The nature of the ideal embodied is suggested in the sixth book of Plato's *Republic*; "Painters must fix their eyes on perfect truth as a perpetual standard of refer-



FIG. 162. PORTRAIT OF PERICLES. BRITISH MUSEUM, LONDON.

ence, to be contemplated with the minutest care, before they proceed to deal with earthly canons about things beautiful." This conception of the artist's aims accounts for many characteristics of fifth century art. The background is omitted from the Parthenon frieze to avoid suggesting the specific setting in time and space which would rob it of ideal unity. Similarly the free figures of the pediments and such works as the Lemnian Athena are impersonal and self-contained for the establishment of any relationship between them and their surroundings or the observer would destroy the sense of integrated, self-sufficient personality that gives them ideal significance. The reason that the unity of frieze and free-standing figures alike would be destroyed by any reference to background and surroundings is that such reference would introduce an element of the specific which by its very presence would imply the existence of its opposite, namely the indefinite. Now it has been pointed out before, in discussing Greek architecture and in the opening remarks concerning Greek sculpture, that one of the most fundamental characteristics of the Greek temperament was its abhorrence of the indefinite. Reality consisted only in what could be grasped by the senses, in the concrete and the tangible. But even what could be seen was not real if it implied something that could not be seen. Thus the neutral background of the Parthenon frieze, with its avoidance of any suggestion of background, also avoids suggesting the existence of space, for it exists as stone rather than as a portrayal of setting. The result is a unity which is ideal because it did not and could not ever have existed, but one which is attained entirely in terms of concrete experience.

The value placed by the Greek upon concreteness as a proof of validity is exemplified by the idea of Death revealed in the grave-stones or funereal stele of the fifth and fourth centuries. One of the finest is in the National Museum in Athens, the *Hegeso Stele* (Fig. 163) which is named from the woman in whose memory it was erected. She is represented as looking at her jewels in a box held by the maid who stands before her. The style is that of the fifth century though somewhat later than the Parthenon figures. The execution is less sophisticated than in the Parthenon sculptures for the artist was not one of the great figures of the Golden Age as can be seen in the clumsily articulated wrists and the very summary modelling of the arms. The bodies have

something of the maturity seen in the more monumental works of the period but the eyes are represented in the full-front view rather than in profile. The draperies are treated in a manner more charac-



FIG. 163.—HEGESO STELE. NATIONAL MUSEUM, ATHENS.

teristic of the later fifth century, being of some thin and clinging material that falls in minute folds and clearly indicates the bodies underneath. The design is in broad and sweeping curves, particularly fine details being the beautiful chair of the mistress, and the subtle line of the robe hanging from the maid's shoulders.

The figure of Hegeso is not a portrait but an ideal type somewhat like that of the Athena Lemnia.

There is no suggestion in the stele of the idea that Death means the end of mortal Life. In fact, there is no suggestion of Death at all. Hegeso is represented in an act which was normal to her everyday life and has no reference to the fact that it is ended. This conception is one which makes objective the statement that the philosophy of the Greek carried him to the mouth of the tomb and no farther. Reality for him was that which could be grasped by the senses and before the great abstraction of Death, he was powerless. Thus in the eleventh book of the *Odyssey* when Odysseus attempts to comfort the shade of Achilles by telling him that he is a prince among the dead, the latter replies, "Nay, speak not comfortably to me of death, oh great Odysseus. Rather would I live on ground as the hireling of another, with a landless man who had no great livelihood, than bear sway among all the dead that be departed." Occasionally the idea of Death is symbolized as the departure on a journey with friends saying farewell, but the subject is treated with great restraint. There is never the bitter grief or cloying sentimentality that appears so often in the funereal art of later periods.

In the Golden Age, the development that began in the archaic period and continued through the transitional one reached its climax. The stiff mechanical figures of the sixth century acquired greater weight and the ability to move in the early years of the fifth and then became the supple, quietly reposing ones of the Golden Age. With the changes in appearance of the figures, there went a corresponding change of mien and bearing. The brisk dynamic energy of the Apollo of Delos gives way to a sense of stern force in the Olympian Apollo which in turn is replaced in the Mount Olympus by a quiet repose which makes the strength of the figure seem the greater for not being expressed. Herein lies the greatness of sculpture in the Golden Age, that it gives final and definitive form to the ideals that are only suggested in the previous periods. Where the archaic and transitional sculptors could portray only in part the beauty of which they dreamed, the sculptor of the Golden Age was able to reveal it in all its glory. Of the great ivory and gold statue of Zeus by Pheidias in the temple of Zeus at Olympia, Dio Chrysostom said "No one, having seen it, will conceive him otherwise thereafter." This is true of

all great art and is the secret of the consistent greatness of the sculpture of the Golden Age. The subjects therein represented are given the ideal form, and they cannot be conceived in any other.

The lofty idealism of the Golden Age could not last indefinitely. Before the close of the fifth century, the spiritual fabric of Greek thought which was based on belief in an established order, revealed from time to time by the gods, was being weakened. Two factors were responsible for this, the materialistic thought of the Sophists on the one hand, and the abstraction of deity into moral order by Plato on the other. Coupled with these was the influence of naturalistic thought culminating in the scientific method of Aristotle. Moreover, the self-assurance of the Athenians, which had been such a vital factor in establishing the cultural and political supremacy of their city had been badly shaken by the defeat of their armies at Syracuse in 411 B.C., the destruction of the fleet in 407 B.C., and was completely broken by the final victory of Sparta at the close of the Peloponnesian War in 404 B.C.

The net result of all these influences was the invasion of the isolated Athenian civilization, which had reached its climax in the Golden Age, by new and previously unconsidered ideas. The old culture had been founded on belief in divine authority and that authority had been questioned. It was no longer valid in interpreting life and experience. Its place was taken by the mode of thought embodied in the philosophy of Euripides, Plato and Aristotle, world-wide in scope rather than arbitrarily restricted to Athenians or even to Greeks, a mode of thought which shattered the complacent isolation in which the Golden Age had taken form. The basis of this mode of thought was not divine revelation but the study of Man and Nature. Obviously the art of the older culture could not give adequate expression to these ideas, and modifications of it appear even before the end of the fifth century. Instead of the austere impersonality of Sophocles, there is the pathos and sympathy for human suffering of Euripides who interprets the myths of the old beliefs in the light of human nature as it is revealed by experience. A similar change occurs in sculpture. The marvelous descriptive technique of the Parthenon figures is no longer utilized to render objective a conception of ideal physical and moral beauty but as an end in itself. The figures

are still ideal, it is true, but the ideal itself is on a less elevated plane.

An example of late fifth century sculpture which indicates the beginning of many of these changes is the Nike or *Victory of Paionios* (Fig. 164) erected at Olympia about 425 B.C. It repre-



FIG. 164.—VICTORY BY PAIONIOS. MUSEUM, OLYMPIA.

sents a winged feminine figure, borne down from the sky on the back of an eagle, the bird of Zeus, and about to come to rest upon a tall pedestal. The advances made in realistic representation during the century and a quarter that separates this figure in time from the archaic Victory of Delos (Fig. 147) are obvious. But the Victory of Paionios also represents a change from the methods of mid-fifth century sculpture, particularly in the treat-

ment of drapery. In the group of the Three Fates (Fig. 158), the robes are of some thick and heavy substance falling in carefully arranged folds and with an individuality all their own that is independent of the bodies they cover even though they are contributory to their effect. In the later figure, the drapery is thin and transparent, hardly concealing the body at all. The covered right leg is as carefully modelled as the exposed left one with only an occasional ridge to indicate the robe.

A little later than the Victory of Paionios are the reliefs which once formed a balustrade around the small Ionic temple of Wingless Victory on the Athenian Acropolis, carved about 410 B.C. The one illustrated shows an attendant *Victory tying her sandal* (Fig. 165). As in the free-standing figure by Paionios, the drapery is thin and transparent. It clings to the body, revealing it in every detail, but without the motivation of rapid movement which explains the similar effect in the other statue. This is not realistic art any more than that of the Parthenon pediments; the sheerest material will not display the form it covers as it does in this relief to attain an effect

as arbitrarily planned as that of the draperies of the Three Fates. The difference between the Nike relief and the Parthenon figures is in the ideal which the sculptor sought to express. In place of majestic repose, there is the simple act of tying the sandal. Such a subject is not appropriate to monumental treatment and the sculptor wisely refrained from attempting it. Instead, he gave full expression to his own delight in mastery of the technique by which



FIG. 165. VICTORY TYING HER SANDAL. ACROPOLIS MUSEUM, ATHENS.

solid stone is made more ephemeral than the finest silk completely revealing the charming, gracefully poised figure. No longer does the observer breathe the rarefied atmosphere of Olympus for here is no goddess but a human being. The Victory tying her sandal does not represent an ideal of divinity but rather a divinely beautiful mortal.

D. THE FOURTH CENTURY

During the fourth century, Greek sculpture continues along the lines suggested by the Victory of Paionios and the relief of



FIG. 166.—HERMES OF PRAXITELES. MUSEUM, OLYMPIA.

the Victory tying her sandal. To the ideal and abstract beauty of the fifth century, there succeeds a beauty which is nearer to that of physical reality. Gracefulness of form and the expression of emotion are the sculptor's aims. In achieving these aims, the human model is followed more closely and the figures become more naturalistic and less formalized. As one critic has remarked, "In the

fourth century, the gods descend a little from Olympus and become more like human beings."

Two sculptors are outstanding in the first half of the fourth century, Praxiteles and Skopas. Both were celebrated in their own time for their figures which were widely divergent in character as they exemplify the two tendencies in fourth century art noted above. Of the work by the two men, it is easier to form a definite opinion of Praxiteles' from existing monuments, for a statue of *Hermes* (Figs. 166, 167) by him was found in the ruins of the temple of Hera at Olympia. It was carved about 350 B.C. The *Hermes* is unique as the only existent statue known to be by the hand of one of the great Greek sculptors, for it has been identified as Praxiteles' work by a chance reference in the guidebook which Pausanias wrote of his travels in Greece during the 2nd century A.D. It is of marble and represents the god *Hermes* carrying the infant *Dionysos* on his left arm. The child is reaching for some object, probably a bunch of grapes which *Hermes* held in the missing right hand. The legs were both broken below the knee and have been restored, but the right foot is original.



FIG. 167.—HEAD OF THE HERMES OF PRAXITELES. MUSEUM, OLYMPIA.

The pose is like that of fifth century standing figures (Fig. 156), but the right hip is thrown out giving the body a broad S-curve, sometimes referred to as the curve of Praxiteles. The body itself is not as heavy as in the fifth century ideal type, the proportions of limbs, torso and head being considerably lighter. With this change in the general proportions of the figure, there appears a method of modelling the flesh which is also different from fifth century practice. In both styles, the flesh is represented by planes that merge into each other to create an effect of roundness. In fifth century figures (Fig. 157), these planes are relatively few in number and contrasted in direction. In the fourth century, they are much more

numerous and merge into each other almost imperceptibly. The result is an impression of real flesh translated into stone rather than an abstraction of that impression as in the earlier style. In other words, the sculptured figure is beginning to approximate the appearance of the model instead of attaining to a self-sufficient identity. Where the older sculptors caused flesh to become marble, Praxiteles caused marble to become flesh.

The head (Fig. 167) reveals other characteristics of Praxiteles' style. Prominent among these is the oval skull with a strongly curved outline tapering toward the chin. The hair is represented by rough, irregular blocks which simulate the effect of short curly locks, their texture contrasting with the smooth lustrous skin. The eyes are narrow, the upper lid projecting so that the glance seems to fall although it is clearly not directed toward any specific object. In the resulting effect of dreamy contemplation, there is no emotion. The modelling of the lips and cheeks is extraordinarily delicate and complex, creating an arresting impression of reality. The nose continues the line of the brow which is divided horizontally by a deep crease, both conventions of the classic ideal of beauty. The sense of texture which makes the figure so convincingly real is also evident in the drapery over the tree trunk which is very carefully studied. It possesses an individuality of its own yet does not detract from the more important human figure, the smooth flesh acquiring greater effectiveness by contrast with its involved folds.

All of these details combine to create an impression of objective reality that more nearly approximates that of the living model than any figure that has been hitherto considered. It is as if a body of transcendent physical beauty had been transmuted into an imperishable medium while retaining all its proper qualities. In the serene detachment of the figure, there is almost the majestic repose of the Parthenon figures, but the lofty remoteness of the fifth century has gone. Austerity has been replaced by a more immediately appealing bodily comeliness, vigor by graceful languor. The Praxitelean ideal is not one of an inner spirit that informs the body with meaning but one of physical gracefulness.

The Hermes was one of Praxiteles' minor works. It is not mentioned by any of his contemporaries, although a number of his other statues are highly praised. Of these, only²⁵ the vaguest impression can be gained through copies which convey little but the

most general qualities of the originals. One of these copies is a Satyr in the Capitoline Museum in Rome, celebrated in literature by Hawthorne as the Marble Faun and a dim reflection of the work which Praxiteles himself considered his best. His most famous statue was the Aphrodite of Knidos, its renown being largely due to his success in suggesting the graceful softness of the feminine body. The goddess was represented in the nude, the first time that a female divinity had been so portrayed in monumental Greek sculpture although such treatment was forecast by the lightly clothed Nikes of the last years of the fifth century. The Aphrodite is known today only through copies. The pose was similar to that of the Hermes, the indolent posture creating the same languorous and dreamy air. Its influence upon contemporary and subsequent sculpture was very great for in it, Praxiteles created the ideal form of the Goddess of Love, just as Pheidias had made objective for all time the Greek conception of Zeus. So true was this that for many years after the fourth century, Aphrodite was not represented in any other form than that conceived by Praxiteles.

Writers of antiquity linked the name of Skopas with that of Praxiteles as the greatest sculptors of their time. But instead of the graceful and languid charm that characterizes Praxiteles' figures, those of Skopas appear to be in the grip of powerful emotion. Unfortunately there are no existing statues which can be positively identified as by Skopas and even those in which his style is reflected are far from being well preserved. One of these is a male *Head from Tegea* (Fig. 168) where Skopas is said by Pausanias to have been in charge of rebuilding the temple of Athena Alea. From the same source, he is known to have executed some of the pediment sculpture, and although the head illustrated cannot be proved to have been actually carved by him, its style corresponds closely to that of figures by him described in contemporary writings. It probably came from a group representing a battle scene in the western pediment. Comparison with the Lapith's head in the Parthenon Metope (Fig. 160) will reveal the extent to which the fourth century sculptor goes beyond the earlier one in the suggestion of emotion. The effect is obtained by a somewhat different treatment of details than has been seen hitherto. The entire head is turned to the left and tilted back. The eyes are opened wide, in contrast to the half-closed ones of the Hermes

(Fig. 167) and are deeply sunken under oblique brows that cast a shadow over them. The glance is intent, focussed upon some definite object. The mouth is open and the upper lip drawn back, reinforcing the emotional effect created by the treatment of the eyes. The head is almost square as compared with the ovoid type used by Praxiteles, its massiveness lending strength to the suggestion of emotion in the general pose and the eyes and mouth.

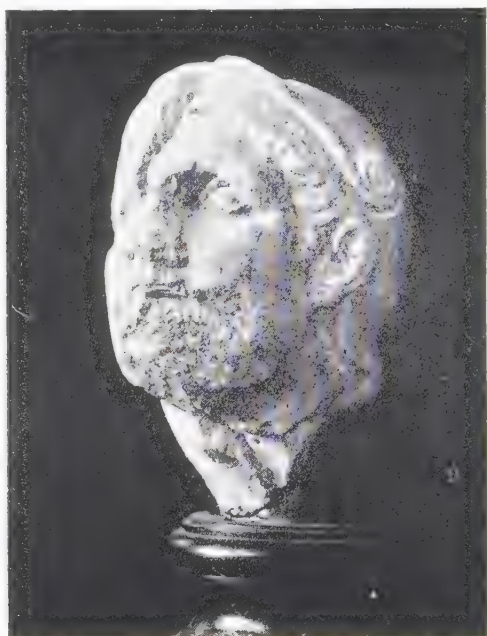


FIG. 168.—HEAD FROM THE TEMPLE OF ATHENA ALEA, TEGEA.
NATIONAL MUSEUM, ATHENS.

These characteristics are encountered in copies of other works by Skopas, notably a statuette in Dresden which is a reduction of a *Raving Maenad* (Fig. 169) that was set up in Byzantium. The Maenads were female followers of Dionysos and the statue by Skopas represented one of them rushing through the woods in an ecstatic frenzy generated by the orgiastic rites of the cult. The head is bent back and the body, revealed by the Doric chiton which is held in place only by a girdle, is strongly twisted on its

axis. The details of the head correspond to those of the one from Tegea and the entire pose is expressive of the powerful emotion that animates the figure. Other works by Skopas that were celebrated in antiquity include sculptures for the tomb of King Mausolos at Halikarnassos and the temple of Diana at Ephesos but none of the existing fragments can be safely attributed to him.

The work of Praxiteles and Skopas falls in the first half of the fourth century. In the last half of the period, the outstanding sculptor was Lysippos, the last of the great original Greek sculptors. Although he was incredibly prolific, having made nearly fifteen hundred statues during his lifetime, there is not a single known original by him in existence and even available copies cannot be considered as entirely adequate reproductions. The best impression of his style as described by classic writers is given by a statue in the Vatican Museum in Rome which is known as the *Apoxyomenos* (Fig. 170). This name means The Scraper and is derived from the fact that the statue



FIG. 169.—RAVING MENAD.
MUSEUM, DRESDEN.

portrays an athlete scraping oil and dust from his body after exercising in the stadium. The figure is lighter and more agile than the fifth century athletic type (Fig. 156), the head being about one-eighth the height of the total. The lithe body resembles the Praxitelean type in proportions but the muscles are dry and hard as compared with the softer form of the *Hermes*. Lysippos was known in his own time as a realist, for, according to his contemporaries, he made figures as they appeared to be rather than as they were. This may seem incompatible with the fact that like Polykleitos, he developed an ideal canon of proportions, but if the Roman copy of the *Apoxyomenos* can be trusted, this canon

was based on a series of conventions that were much more naturalistic than previous ones.

The greatest point of difference between Lysippos' statue and those considered hitherto lies in the conception of the figure as a whole. The Doryphoros by Polykleitos (Fig. 156) is represented in the act of taking a step; the contrasted tense and relaxed muscles

suggest that it is capable of moving but the figure is rendered immovable by the functional balance of the arms and legs. In the Apoxyomenos (Fig. 170) the movement is actually represented for the figure is twisted in the act of shifting weight from one leg to the other, in contrast with the Polykleitan figure which is capable of moving but does not. There is thus introduced an element of time, an intangibility quite foreign to the ideal if arbitrarily unified concepts of the fifth century. The impression of actual movement is made even stronger by the tenseness of the body and the excited awareness of surroundings in the face. This latter characteristic implies a consciousness of setting that is also foreign to the fifth century ideal and which is emphasized by the three-dimensional



FIG. 170.—THE APOXYOMENOS.
VATICAN, ROME.

sional spatial concept of the figure. It has been pointed out that the prevailing conception of the statue in earlier styles was one of a two-dimensional unity which could be grasped from a single point of view and no other. Even in such a work as the Three Fates (Fig. 158), the impression of three-dimensional solidity essential to its unity can be felt only from a specific standpoint. The Apoxyomenos, on the other hand, is so designed that its full effect can be grasped only from several points of view

successively assumed. From the angle at which the motion of the left arm and its relationship to the right arm is perfectly clear, the movement of the lower part of the body is much less intelligible. It is thus necessary for the observer to move *around* the statue to obtain the full effect of its action, an implicit acknowledgment that it is surrounded by space with which it is definitely related.

The significance of these details of fourth century art which appear in the sculpture of Praxiteles, Skopas and Lysippos does not consist only in changes in appearance from fifth century types. These changes are indicative of a different philosophy of life. For the self-sufficient impersonality of the earlier figures, the fourth century substituted the languorous grace of Praxiteles, the passion of Skopas and the space-impling three-dimensional concepts of Lysippos. The presence of any or all of these qualities in a statue renders it incapable of being an isolated unity, for its full significance can be grasped only by assuming the existence of things other than the statue itself. In the Hermes, the suggestion of elements lying outside the figure is a negative one, implied by the air of dreamy reverie that results from lack of the comprehensive assurance that gives a fifth century figure its impersonal poise. In Skopas' work, this suggestion becomes positive for the fixed glance of the eyes carries the observer away from the figure. In Lysippos' figures, this suggestion becomes objective in the three-dimensional conception which establishes a definite relationship between the statue and its surroundings as well as in the awareness of those surroundings apparent in the faces. All these details reveal clearly that every artist is the child of his age, no matter how original he may be or how great his creative genius. It would have been impossible for the fourth century artist to work in the style of the fifth because his background of thought was different. By the close of the fourth century, Man was becoming increasingly aware of his surroundings and the earlier anthropocentric philosophy which was based on his consciousness only of himself was inadequate to interpret experiences that had hitherto been disregarded. The sublime self-sufficiency of the Golden Age was born of a conscious simplification of life. The relative complexity of experience in the fourth century demanded a more elastic philosophical scheme as a basis of interpretation and a more naturalistic style in art to give expression to it. The Aristotelian code replaced the Socratic; the art of Praxiteles, Skopas and Lysippos succeeded to that of Polykleitos and Pheidias.

CHAPTER XVIII

HELLENISTIC SCULPTURE

FOR all the greatness of its achievements, the culture of the Golden Age was a primitive one. Its philosophical method was one of restriction, in that it was concerned with the interpretation of an arbitrarily limited scope of human experience. In its most comprehensive aspect, this culture was Hellenic, that is, it existed in Hellas or the peninsula of Greece; in its narrowest aspect, it was Athenian. Similar restrictions are apparent in art of the Golden Age as well, as has been pointed out. The political dominance of Athens in the Greek world came to a close at the end of the fifth century, coincident with the appearance of new modes of thought which shattered the intellectual isolation established in the Golden Age. During the fourth century, the expansion of artistic productivity in Greece is marked, geographically as well as in the scope of effects. When the various city states were subjugated by Macedonia and incorporated in the empire of Alexander the Great between 336 and 323 B.C., it was possible to speak of a general Hellenic art. The great military leader's appreciation of the intellectual and artistic achievements of the race he had conquered is well known; it is illustrated by his patronage of Aristotle, whose pupil he was, and of Lysippos who was the only sculptor permitted to make portraits of him. The encouragement which he gave to Greek artists and the spreading of the principles of Greek art over the entire known world by his military conquests were instrumental in finally destroying the isolation in which fifth century art had been born, and which was modified in the fourth century. The third century witnessed the establishment of a new style known as Hellenistic.

Hellenistic is the term applied to the art of the whole Mediterranean world from the death of Alexander the Great in 323 B.C. to the conquest of Greece by Rome in 146 B.C. During that time, the productive centers of art were no longer on the Greek mainland but in the new states that grew up in the Alexandrian empire. The prosperity that they attained drew the successors of the



FIG. 171.—VICTORY OF SAMOTHRACE. LOUVRE, PARIS.

great fourth century artists away from Athens which sank rapidly in power and prestige in the subordinate political rôle forced upon her as punishment for opposing Alexander and his successors. Pergamon, Rhodes and Alexandria were the chief centers of artistic activity with minor ones in Antioch and Corinth. The sculpture produced in these centers represents a development of the tendencies noted in fourth century art; the style they embody is Hellenistic because it represents a diffusion of Hellenic ideals both geographically and artistically as a result of influences from other traditions.

By a Rhodian is the famous Nike or *Victory of Samothrace* (Fig. 171) now in the Louvre in Paris. The exact date of its creation cannot be determined, suggestions of equal plausibility having been made for one as early as 325 B.C. and another as late as 258 B.C. It commemorates a naval victory and represents a winged female figure that has just descended from the sky upon the prow of a ship. In the Victory of Samothrace, the culmination of a long series of flying figures is seen, beginning with the Victory of Delos (Fig. 147) and continuing through that of Paionios at Olympia (Fig. 164). Both arms are missing and nothing in the figure gives a clue to their arrangement but it is probable that the right hand held a trumpet on which a triumphal blast was being sounded. The strongly built body is twisted on its axis as in the figures of Skopas and Lysippos. The draperies are in contrasting light and heavy folds which reveal the body underneath and contribute to the sense of sweeping, forward movement. The achievement of a logical articulation of wings and body had always been a problem in representing flying figures; it is solved in the Nike of Samothrace by balancing the backward thrust of the wings against the forward one of the breasts and the powerful chest. In its successful embodiment of the violent emotions attendant upon battle and victory, the Nike of Samothrace is one of the finest achievements of Hellenistic sculpture.

No less successful than the Nike of Samothrace as the concrete portrayal of an ideal is the *Aphrodite of Melos* (Fig. 172) in the Louvre in Paris, more generally known as the Venus de Milo. It is probably the best-known classic statue in the world, its popularity being due in some measure at least to the enthusiasm created by its discovery something over a century ago when the Classic

Revival was at its height. Its place of origin and date are unknown but it was probably carved during the third or second centuries B.C. As in the case of the Nike of Samothrace, the action of the missing arms can only be surmised; it has been suggested that the right hand was represented holding the draperies while the left rested on a column that served to support the figure. The hair is in conventionalized strands, not unlike those of the Lemnian Athena (Fig. 159), but the face is more expressive than in the Pheidian type, being closer in this respect to the Praxitelean. The head is small in relationship to the body which has the slightness of the Lysippic canon and its twisted stance. The flesh is modelled in broad, simplified planes and has the softness seen in Praxiteles' work without the sensuality that appears in that of many of his followers. Its texture contrasts with that of the draperies which are naturalistically rendered and at the same time arbitrarily arranged to display the figure to its best advantage. This introduces an artificial note in the effect of the figure that is rather disquieting; the draperies could hardly remain in place if the figure were to take a step which it appears to be quite capable of doing. But the lack of complete unity in the effect of the statue does not obscure the fact that it represents a noble and dignified conception of humanity. In the fifth century, the idea of the sculptor was divine; in the fourth century it became semi-divine and in the Hellenistic period, it became human. Such is the ideal embodied in the Aphrodite of Melos, an ideal of earthly rather than supernatural beauty as befitting a worldly age and civilization.

The Nike of Samothrace and the Aphrodite of Melos are examples of Hellenistic sculpture based more or less directly on forms developed in previous ages. In the *Dying Gaul* (Fig. 173),



FIG. 172.—APHRODITE OF MELOS.
LOUVRE, PARIS.

in the Capitoline Museum in Rome, a subject foreign to fifth and fourth century art is represented. The bronze original, here copied in marble, was one of a group of statues erected at Pergamon shortly after 241 B.C. to celebrate the military victory of Attalus I over the northern barbarians who had invaded Asia Minor. The wounded warrior is on the point of death, supporting himself on his right arm which is about to yield as his strength ebbs away. The details of the mustache, matted hair and the twisted gold collar around the neck are represented very realistically and distinguish the figure as a barbarian by contrast with the ideal

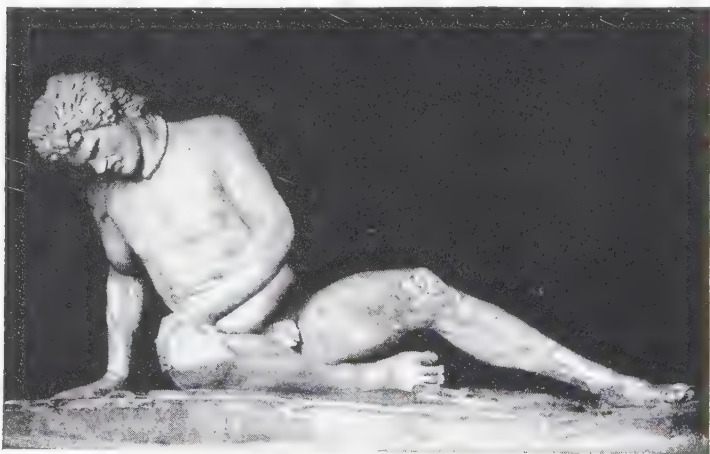


FIG. 173.—DYING GAUL. CAPITOLINE MUSEUM, ROME.

type used to portray Greeks. The realistic trend of Hellenistic art is further indicated by the hard dry skin and the heavy muscles, as well as the drops of blood oozing from the open wound. The proportions of the figure conform to the canon of Lysippos but the emphasis on emotional content is in the manner of Skopas. The use of naturalistic details in portraying a subject of the nature of the Dying Gaul might easily have resulted in a highly disagreeable effect, had not the sculptor introduced them with great restraint. They do not exist as mere *tours de force* of technique but to give concreteness to the idea which the figure represents, the anguish of defeat that kills the spirit rather than the pain of physical violence that destroys the flesh.

Still another aspect of Hellenistic art is seen in a relief of *Athena slaying a Giant* (Fig. 174) that once decorated the Altar of Zeus at Pergamon, erected between 180 and 160 B.C. It forms part of a long frieze representing the mythical battle between the gods of Olympus and the giants of the earth, a favorite subject for architectural sculpture from the beginning of Greek art. The manner of treating it has little resemblance to that in previous examples, however, even though the theme was a traditional one.



FIG. 174.—ATHENA SLAYING A GIANT. PERGAMON FRIEZE. BERLIN

The struggling forms of serpent-legged giants and gods fill the entire frieze, the design being unified by the violent action that pervades the ensemble. This sense of action is conveyed by the knotted muscles and contorted faces and more abstractly in the diagonal accents of the composition as a whole. The animation of the figures is carried to the point of exaggeration, there being hardly a single body in repose in the entire frieze. The influence of Skopas' style is apparent in the heads, both in the shapes and in the emotional expressions. Throughout the entire frieze, the great technical skill of the sculptors is evident in the accurately

rendered anatomical details, the texture of the draperies and flesh and the powerful wings of the gods, no less than in the masterful achievement of a unified design.

In striking contrast with the violence and unrestrained emotion of the Pergamon frieze is the gentle sentiment that pervades a series of reliefs such as the *Peasant driving a cow to market* (Fig. 175) in the Sculpture Museum at Munich. The term Alexandrian is applied to the entire category as the first examples seem to have originated in Alexandria during the Hellenistic period. The

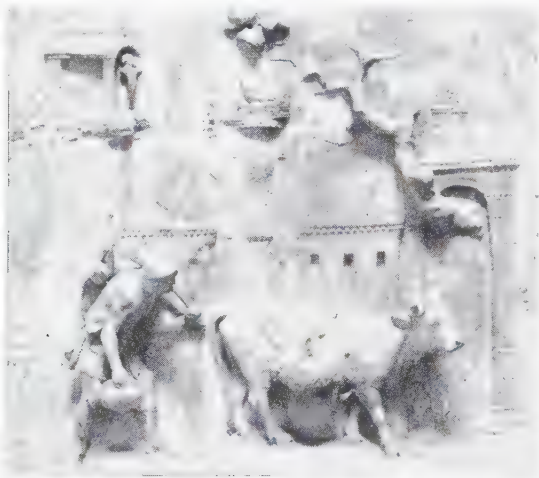


FIG. 175.—PEASANT DRIVING A COW TO MARKET. GLYPTOTHEK, MUNICH.

one illustrated was probably carved about 50 A.D. The pastoral subject embodies the same idyllic concept of rural life that underlies the poems of Theocritus. In contrast to fifth century reliefs (Fig. 161), the background is very naturalistic. The figures themselves are different from those of fifth century sculpture in that their forms are suggested by a play of light and shade rather than by modelling. This means that the various details are not actually carved to reproduce those of the model but that the stone is worked in such a way that hollows and projections create shadows suggesting the form of the original. The result is an illusion of reality, from which the style is often called an illusionistic one. There is an illusion of space as well as of form in the

relief. It results from the varying projections of the different objects, the peasant and cow standing almost free from the background while the temple and the statue base stand out very slightly. The tree growing out through the temple portal is an important factor in creating the illusion of depth in the relief, serving as it does to connect the foreground with the background. The illusionism of such a relief implies a point of view which is optical rather than tactile as in the earlier styles. A fifth century relief would be reasonably intelligible to the touch without being seen; a Hellenistic relief such as this one is intended primarily to be seen and makes hardly any appeal to the sense of touch. Still another point differentiates the pastoral relief from that of the fifth century. It begins to take on the quality of a picture in stone, quite independent of its surroundings, while fifth century relief is almost entirely architectonic, subordinate to the decorative scheme of the building it ornaments. To some extent, this new conception of relief may have been due to a similar tendency which made itself apparent in painting, easel pictures to be hung up as wall ornaments taking the place of the more architectural mural type that was painted directly on the wall.

At the beginning of this chapter, the dates of the Hellenistic period were given as from 323 to 146 B.C. This might be somewhat amended, for in the broadest sense, the Hellenistic period did not come to a close until several centuries after the beginning of the Christian era, the influence of Hellenistic ideas being perceptible in much of the art produced during the First Millennium. None the less, after 146 B.C. the Greek strain in Hellenistic art becomes less prominent and the influence of other racial ideals correspondingly greater. Thus the sculpture produced from 146 B.C. until 27 B.C. is usually called Græco-Roman. Much of it was created in Greece or by Greek artists but in response to the demands of Roman patrons. Many of the copies of fourth and fifth century statues that now constitute almost the only source of objective information about the sculpture of those periods were made at this time. But the influence of Roman taste is also evident in original works of the period, in the subject matter and the striving for ultra-realistic effects that is one of the main characteristics of certain types of Græco-Roman sculpture.

One of the most famous statues of classic antiquity, the group of *Laocoön and His Sons* (Fig. 176) is an example of Hellenistic

sculpture produced during the Græco-Roman period, it having been executed about 50 B.C. It is now in the Vatican Museum in Rome. Its fame is due in part to the circumstances surrounding its discovery in 1506 when it was hailed as a masterpiece of the finest period of Greek sculpture. Another factor contributing to its popularity was the renown achieved by the book of the same name written by the German esthetician Lessing embodying



FIG. 176.—LAOCOÖN AND HIS SONS. VATICAN, ROME.

one of the most widely accepted theories of art in the 18th century. The arrangement of the group follows the account in the *Æneid* of the punishment of Laocoön and his sons though not in all details. It is pyramidal in form, the bodies united in a compact mass. The right arm of the father and that of the son to his right have been incorrectly restored and should be lower, in which case the coherence of the group would be even more marked. The marvellously naturalistic modelling of the bodies is characteristic of the period. It is employed to establish effective contrasts in

the group as a whole such as that between the adult body and the adolescent ones. Another contrast is seen in the muscles of the figures, the father's strained in an almost superhuman effort to free himself and his sons from the entwining snakes, those of the son to his left likewise being tense while the other youth has collapsed. The expression of agony on the father's face is created by the downward sloping brows, the drooping eyes, the contorted forehead and the parted lips, producing an effect that is very realistic. The group was the work of three sculptors of the Rhodian school and their skill in representation and design is obvious. It is difficult to find words of praise for the ideal upon which the technical skill is lavished, however. The extent to which the sculptors have gone in dwelling upon the details of physical pain and suffering is almost pathological. It should be compared with the Dying Gaul (Fig. 173), in which mental anguish is portrayed rather than bodily torture. The sympathy aroused in the spectator by the earlier work is not felt in the presence of the Laocoön group, but rather a sense of repulsion.

The realism of the Laocoön is an outstanding characteristic of Græco-Roman art in certain of its phases. In this particular case, it cannot be said to be the result of Roman taste as the sculptors were Greeks and the entire concept might be rightly considered as a continuation of the style observed in the relief from the Pergamon Altar (Fig. 174). A more direct Roman influence upon the work of a Greek artist is seen in the statue of a *Boxer* (Fig. 177) in the Terme Museum in Rome. It is signed by Apollonios, the son of Nestor, an Athenian who was active about 50 B.C. It is probably a free copy of a third century Pergamene original modified in the direction of greater naturalism in accordance with Roman tastes. It is of bronze, the color of the metal suggesting the weather-beaten hide that is stretched taut by enormously developed muscles. The professional fighter is indicated by the gnarled fingers of the stubby, powerful hands, the cestus or gloves of metal knuckles joined by strips of leather, the broken nose and the thick, cauliflower ears. Other veracious details are the hairy chest and legs and the beetling brows. The realism of the face was originally even greater by virtue of colored paste eyeballs which have since disappeared. The sense of actuality which all these characteristics give to the figure is heightened by its momentary pose, the head being turned to one side as if in response

to a question while the jolted brain seeks painfully for an answer.

One of the outstanding features of Hellenistic sculpture is its great variety of methods, forms and subjects. The Nike of Samothrace and the Aphrodite of Melos are themes that were treated in earlier periods and the sculptural methods employed in them also have precedent in preceding styles. The Pergamon Frieze, on the other hand, is an old subject treated in a new way while



FIG. 177.—BOXER. TERME MUSEUM, ROME.

the Dying Gaul and the Peasant driving a Cow to Market are new subjects without prototypes in fifth and fourth century sculpture and involving, in the case of the latter at least, a new sculptural technique. But the lack of unity in Hellenistic sculpture as a whole and the resultant impression of confusion reflect truthfully enough a comparable state of fluidity in Hellenistic thought. In the fifth century, an integrated philosophical system was evolved and the art of the fifth century is correspondingly homogeneous though primitive still in that it was an attempt to interpret life

only in terms of arbitrarily limited experience. In the Hellenistic period, the scope of experience had been tremendously enlarged. The complex life of this period was something which the old philosophical and artistic forms were no longer capable of interpreting. The varied aspects of Hellenistic sculpture are the result on the one hand of attempts to meet this complexity by adaptation of old forms and by the development of new forms on the other.

Hellenistic sculpture is often termed decadent, a judgment manifestly unfair to the high degree of technical skill apparent in it and its vitality. The qualities which are considered evidence of decadence are rather due to the lack of an ideal which could be effectively expressed in sculpture. As has been pointed out, fifth century thought lent itself admirably to this end for it was one that involved isolation of the individual from his surroundings, an ideal which can be portrayed with relative ease in terms of concrete form. Even in the fourth century which conceived the individual as aware of his surroundings, an art of form could be employed as a means of expression. But in the Hellenistic period, the individual was no longer considered as isolated from his environment or merely conscious of it but as conditioned by it. To portray Man as part of his surroundings, some means of suggesting space is essential, an effect which is intrinsically one of painting as far as the representative arts are concerned and relatively difficult of attainment in sculpture. To the Hellenistic mind, the world was one of space, of light and shade, in contrast to the fifth and fourth century concept which saw it in terms of form and expressive outline. The Hellenistic world was that of the painter rather than the sculptor and Hellenistic art is most significant when it deals with space and *chiaroscuro* effects in easel paintings and frescoes. (Fig. 240.) The apparent decadence of Hellenistic sculpture is due to the fact that although its technique had been perfected in previous periods, the ideals to which that technique gave expression were no longer valid and the new ones still in the process of evolution did not lend themselves to sculptural treatment. The result was that which is inevitable when a means of expression exists with nothing to express. Without new problems to solve or new subjects to represent, sculpture could only turn back upon itself or attempt to follow the path taken by painting. In either case, there was little to be gained. In the

latter (Fig. 175), the results serve chiefly to point out the limitations of the art. In the former, a brilliant eclecticism only emphasizes the relative lack of content, as in the Aphrodite of Melos (Fig. 172), though an occasional new theme (Fig. 173) is invested with ideal meaning that acquires force through a superb technique.

CHAPTER XIX

ROMAN SCULPTURE

IT HAS already been pointed out that after 146 B.C., Hellenistic sculpture enters what is known as the Græco-Roman phase, in which Greek artists were still very active but under a stimulus which came from Rome. Thus it came about that for some time before a definitely Roman sculptural style can be said to have existed, Roman ideas were an influential factor in Hellenistic art. The nature of these ideas has been suggested in connection with the Boxer of the Terme Museum in Rome (Fig. 177). The factual sense that characterizes Roman architecture is equally powerful in Roman sculpture, resulting in a style that is naturalistic to a degree unapproached hitherto. The origin of this naturalism can be found in Etruscan sculpture, the style developed in Italy before the Roman period and which was influenced by Greek styles to a considerable extent. This Greek influence did not alter the indigenous tastes of the country, however, but is apparent chiefly in the details of figures that are rather heavy in proportion and much more naturalistic than in the Greek styles. It is thus possible to speak of a native Latin style in Italy, affected from the outset by Greek modes whose influence became more direct and more powerful during the Græco-Roman period. During that period, which came to an end about 27 B.C., sculpture in Italy may be considered as one of the many regional styles that form the Hellenistic one when they are all taken together.

With the establishment of the Roman Empire, a change appears in Latin sculpture. The reason for this change is to be found in the need then felt to give expression to ideas that were specifically Roman and as such, could not be embodied in the forms in use before that time. It is for this reason that in Roman sculpture, the mannerism and artificiality that characterizes the Hellenistic styles is not so apparent. New subjects supplied the stimulus to the creation of new forms, the lack of which had forced Hellenistic sculptors to meaningless displays of technical skill. In the need to give expression to the grandeur of Rome and to glorify

the deeds of the Emperor, a stimulus existed which led sculptors once more to invest their figures with some definite character. The sculptures in which these ideas were embodied fall into two classes, each of which may be considered as specifically Roman contributions to the art of sculpture, portraits and carved historical reliefs. In both, the highly developed Roman taste for realistic portrayal is evident. Both also have precedents in the Hellenistic style, but in Roman hands, both are treated in an individual manner that

makes them truly original and quite different in character from any prototypes that may be found for them.

The fondness of the Romans for realistic portraiture probably had its origin in the Etruscan practice of preserving the features of the dead by wax death-masks which were later used as the basis for portrait statues. Needless to say, such a procedure involved no idealization of the face nor was it desired. Perfection was the "speaking likeness" and any variation from the exact appearance of the model was avoided. Thus in the green basalt bust of *Julius Caesar* (Fig. 178) in the Imperial Museum in Berlin, the sculptor omitted no detail essential to an exact likeness of

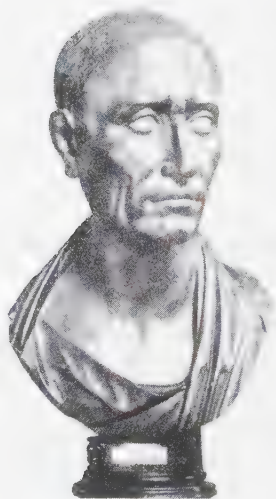


FIG. 178.—PORTRAIT OF JULIUS CAESAR. IMPERIAL MUSEUM, BERLIN.

the living man, in striking contrast to the idealization apparent in Kresilas' portrait of Pericles (Fig 162). The taut muscles of the lean throat, the furrowed brow, the lines around the mouth and chin and the sparse hair of the head are specific and individual traits. At the same time, the bust is more than just a photograph in stone for it suggests the keen and incisive mind of Caesar himself. The fleck of light in the drilled pupil of the eye creates an impression of alert awareness. The sensuality for which he was famous in a sensual age can be read in the thin lips, no less than the burning ambition

whose implacable demands are evident in every line of the ravaged countenance. In contrast with the portrait of Pericles, this bust is an embodiment of the individual qualities of Caesar as a man rather than a symbol of the idea of Caesar as a statesman or general.



FIG. 179.—AUGUSTUS FROM PRIMA PORTA. VATICAN, ROME.

An attempt to combine traditional Roman realism with Greek idealism is seen in the statue of *Augustus from Prima Porta* (Fig. 179) in the Vatican Museum in Rome. It represents the Emperor as a general addressing his troops. Individual traits are prominent in the head; the skull tapering sharply toward the chin, the high cheek bones, deeply recessed eyes and the arrangement of the hair are all details that can be observed in other portraits of Augustus. Realistic touches are seen in the elaborately carved breastplate, the numerous folds of the drapery and the tunic fringe.

The literal treatment of these details contrasts strangely with the idealizing tendency apparent in others. The feet are bare in the Greek tradition of the heroic figure and the expression of the face is calm and self-contained. The pose and proportions are based on the Polykleitan Canon and furnish evidence of the renewed influence of Greek sculpture on that of Rome in the Augustan age. This was due in large measure to the taste of Augustus himself whose appreciation of Greek art was quite genuine. The combination of naturalistic and generalized details in the Prima Porta statue that results from the more or less conscious efforts of the Roman sculptors to create a figure with ideal significance is not entirely successful. In an attempt to raise the concept to that level, the sculptor introduced Cupid astride a dolphin at the feet of the Emperor, a symbolic reference to the divine ancestry of the Julian family which claimed descent from Æneas, the son of Venus and a half-brother of Cupid. The relief on the breastplate also has symbolic meaning, referring as it does to the peace and harmony that prevailed throughout the Roman Empire under Augustus' wise and benevolent reign. Such attempts as these to invest a concretely conceived figure with ideal meaning by allegoric attributes are typical of the methods employed by an art of naturalism to transcend its innate materialism.

A combination of naturalism and allegory somewhat similar in effect to that of the Augustus from Prima Porta appears in the greatest sculptural monument of Augustus' reign, the Ara Pacis Augustae or the Altar of Augustan Peace which once stood by the Via Flaminia. The altar was a rectangular building about thirty-five feet square, the inner and outer walls of which were covered with relief sculptures representing state officials and the Emperor with his family making a sacrifice of thanksgiving to the Earth for peace and prosperity. Its erection was ordered by the Senate in 13 B.C. to commemorate the final pacification of Gaul and Spain by Augustus. The Earth or *Tellus* (Fig. 180), happy and productive under Roman rule, is personified by a feminine figure. On her lap are two children typifying Humanity which thrives upon the Earth's bounty symbolized by animals and the life-giving elements of Air and Water. This relief was the goal of a procession formed by the royal family and a retinue of officials. The ideal type of the Tellus figure is in strong contrast to the naturalism of the animals and the garlands. The technique is not

unlike that of the Hellenistic pictorial reliefs (Fig. 175), the figures being built up in many planes of varying depths. The relative nearness of the seated figures is indicated by pronounced projection while the foliage is barely raised from the relief background. By this means, an identification of the neutral background with real space is achieved, an illusion which is furthered by the extremely naturalistic rendering of the draperies and the modelling of the figures which seem to merge into the stone.

The illusionistic relief style exemplified by the Ara Pacis reaches the climax of its development in the *Reliefs on the Arch of Titus*



FIG. 180.—TELLUS RELIEF FROM THE ARA PACIS. UFFIZI GALLERY, FLORENCE.

(Fig. 181) which was erected near the Roman Forum to commemorate the conquest of Jerusalem in 71 A.D. These reliefs portray the triumphal procession in which the spoils of the Synagogue in Jerusalem were displayed to the Roman populace. In the upper panel, the Emperor rides in his chariot, accompanied by a symbolic figure of Victory, while others personifying Rome and the Roman people appear elsewhere. In the lower panel, a group of soldiers carrying the table of the showbread, the long trumpets that called the Jews to prayer or battle, and the seven-branched candlestick, are about to pass through a triumphal arch. In both panels, the sculptor attempted to portray the scene as it would actually appear to a spectator looking through a window,

represented by the frame of the panel. To give the scenes reality, an illusion of space is created by subtle variations in the depth of the relief, the foreground figures standing out very clearly while objects in the background are almost imperceptible. In this way,



FIG. 181.—RELIEFS ON THE ARCH OF TITUS. ROME.

an effect of light and shade is obtained that gives the impression of real air circulating between the figures. Only ignorance of the laws of perspective prevented the sculptor from attaining the effect of concrete reality that was his ideal. It is because of this, for example, that the figures in the lower panel do not march through

the arch, and that the chariot horses in the upper one are represented one in front of the other instead of all four abreast.

In the Arch of Titus reliefs, composition and arrangement do not exist. The figures are not subordinated either to an architectural scheme or to order that is formal in its own right. Instead, they are placed in the relief space with a casualness that is entirely naturalistic, moving about in real space as if seen through an opening in the sides of the arch. They are therefore entirely descriptive in value, and embody neither the ideal unity of time, of space or of plastic form that a Greek sculptor would have maintained (Fig. 161). The lack of chronological unity in the reliefs is apparent in their arrangement, parallel to each other across the central passage of the arch although their actual relationship to each other was consecutive.

In the reliefs of the Arch of Titus, coherence is attained in the life and vitality that seems to animate each figure. This liveliness is produced by the play of light and shade over the whole panel creating patterns that conform to the actual appearance of the objects represented. A considerable degree of technical skill was essential to the attainment of such an effect. The artist had to have complete understanding of the modelling of the figures in order to create the effects of light and shade which such modelling would produce. When that understanding disappeared as it did in the late years of the Roman Empire, the illusionistic style was no longer capable of producing intelligible results. This is clearly demonstrated by the *Reliefs on the Arch of Constantine* (Fig. 182), erected in Rome in 315 A.D. The particular reliefs under consideration are those in the long rectangular band which are later in date than those in the round medallions. Instead of being united in a common action, the figures are arranged in monotonous rows, each one carefully isolated from those around it. In them, the descriptive tendency of the earlier reliefs has been carried to excess; the sculptor felt it essential to portray each figure and each detail of each figure quite clearly, neglecting entirely the dramatic and spatial relationships that unify the earlier works. It is as if one of the animated scenes of the earlier style had been crystallized; the separate components are very carefully depicted but there is no element to establish a connection between them, whether dramatic and spatial as in the Arch of Titus reliefs or formal and decorative as in Greek relief.

The squat and unprepossessing figures that people the reliefs on the Arch of Constantine represent the complete decay of the classic tradition of sculpture in the west. Superficially, they bear some resemblance to the archaic figures with which the tradition began (Fig. 148) for in them also, each part of the body is represented in its most characteristic aspect. In both styles, the figures



FIG. 182.—RELIEFS ON THE ARCH OF CONSTANTINE, ROME.

are portrayed by means of conventions, but between the conventions themselves, there is a very significant difference; those of the archaic method are conventions of form whereas those of the decayed illusionistic style are conventions of light and shade. The results in either case are not naturalistic; in the archaic figure, this is a minor consideration for the source of its appeal is its strongly developed plasticity; in the late Latin figure, it is a very important consideration for, without naturalism, it is nothing inasmuch as the entire illusionistic tradition was one which tended to disregard plastic values in favor of dramatic or spatial ones. When

the ability to represent things in a naturalistic fashion no longer existed, there was no longer anything in the figure for it had never had any plastic values but only an illusion of them.

Roman sculpture, and Roman art in general, represents a continuation of the Hellenistic tradition. In one sense, it may be considered as reflecting the first step toward an evaluation of the tremendously varied experiences which were inevitable in consequence of the universal and comprehensive nature of Hellenistic thought. The initial bewilderment of the Hellenistic mind in the face of such complexity can be read in the diffuse character of Hellenistic sculpture. In the Roman period, there is an effort to resolve this complexity into order in terms that are still classic in that they are factual and concrete. It has been pointed out before that the Roman architect sought to make space a plastic and objective thing in the interior of the Pantheon (Fig. 24). A similar motive animated the Roman sculptor when, as in the Arch of Titus reliefs, by portraying definite persons in a specific setting at a definite moment, he attempts to make both time and space objective. The difference between the Greek point of view and the Roman lies in the fact that the Greek sought to establish ideal unities of time and space by subordinating them to other things while the Roman sought the same end by making them specific and concrete. In architecture, this attempt was successful; in sculpture, it was only relatively so, for the Roman sculptor was able to attain spatial values only at the expense of formal ones by virtue of his illusionistic technique of light and shade.

At the beginning of this chapter, it was pointed out that Roman sculpture attained the level of an individual and characteristic style by infusing Hellenistic forms with new meaning to give expression to ideals that were specifically Roman. The decadence of Roman art set in when there were no longer valid ideals to serve as a stimulus to creation. Furthermore, even in this respect, there is a difference from the prevailing state of affairs in the Hellenistic period. For all the emptiness that characterizes many of the brilliant *tours de force* of the Hellenistic style, there still remained something of the old Greek tradition of expressive form, as well as the obvious delight taken by many Hellenistic sculptors in merely displaying their technical skill. A period thus characterized can hardly be termed decadent as is often done. By contrast, the Roman period from about 200 A.D. to 330 A.D.

can hardly be termed anything else. There are neither abstract ideals nor technical skill apparent in the sculpture of that period in which the final stage of the direct classic tradition is reached. New ideals had to be evolved and a new technique developed before a new sculptural tradition could take form. These processes take place during the First Millennium of the Christian Era.

CHAPTER XX

MEDIEVAL SCULPTURE

A. THE EARLY MIDDLE AGES

DURING the First Millennium of the Christian Era, sculpture, like the other arts, became a handmaiden of the Church in spite of the Biblical injunction against the creation of images that had been an essential feature of the Jewish faith as long as it was found only among the Semitic tribes. When Christianity spread to western Europe, this interdiction was more or less disregarded as were many others. The whole fabric of Christianity in the Occident was erected on a foundation of compromise which involved the adaptation of many pagan beliefs and their incorporation in the new faith. One aspect of this adaptation appears in Early Christian sculpture which consists almost entirely of forms derived from the current decadent Latin style to which new meaning was given by symbolic devices. One of the outstanding examples of this practice is the new significance in Christian art of a subject that had appeared in classic art from the earliest period of Greek sculpture, a shepherd carrying a lamb over his shoulders. It was not difficult for the Christian to see the Good Shepherd in statues of this subject and it was carried over into the iconography of Early Christian art almost unchanged.

As the Latin Church passed through the earliest stages of its development and its beliefs outgrew the primitive ones that had sufficed in the beginning, the comparatively simple way of expressing those beliefs in concrete form that is exemplified by the adaptation of the Good Shepherd type was no longer adequate. By the middle of the 4th century, a more complicated symbolism appeared in Early Christian art. Most of the sculptural examples are sarcophagi such as the one in the Lateran Museum in Rome known as the *Sarcophagus of the Two Brothers* (Fig. 183) from the portraits of the deceased in the conch shell. The friezes are made up of Old and New Testament scenes that portrayed symbolically a belief in life after death, the element in the Christian

faith which appealed the most strongly to the early adherents of the Church. The figures are in the same decadent illusionistic style that has been noted in the frieze on the Arch of Constantine (Fig. 182). In the nude figure representing Daniel in the den of lions immediately below the conch shell, there is a vague reminiscence of the Lysippic Canon of the Fourth Century. There is some attempt to distinguish the heads of the two brothers but the woefully inadequate technique of the sculptor falls far short of investing them with the life and vigor of the Roman portraits. The decay of the Hellenistic and Roman illusionistic style is even more evident in the dull formulas of the heads and



FIG. 183.—SARCOPHAGUS OF THE TWO BROTHERS. LATERAN MUSEUM, ROME.

draperies and the monotonous repetition of the figures. The scenes are neither separated from each other nor related in this art which can achieve no unity at all, either decorative or dramatic. The classic tradition in the West was worn out; even the powerful stimulus of new beliefs could no longer invest its decadent forms with significance or beauty.

While the sculptors in the service of the Western Church were fruitlessly endeavoring to fill the old bottle of the illusionistic style with the new wine of Christian symbolism, their contemporaries in Byzantium and the Near East were developing a style which also had its roots in classic art. It has already been pointed out that conditions in the Christian Orient were generally more favorable to the production of significant works of art than in the West during the First Millennium. To offset this advantage, there was

an inherent disapproval of graven images which was rooted in the mystical beliefs of the Orient and was a much more powerful influence in East Christian art than in the West. One result of this is the almost total absence of monumental Byzantine sculpture although there were apparently no objections to carved figures on a small scale, in the form of small ivory relief panels which were used as icons or sacred images and to decorate the covers of manuscript books. Such a relief is that of the *Crucifixion* (Fig. 184) in the Metropolitan Museum in New York. The figures are inscribed, the standing ones being the Virgin Mary and St. John. The small seated figures are the soldiers who cast lots for the Savior's clothing and the reclining one under the cross is a personification of the hill of Golgotha. At each end of the lateral arms of the cross are allegorical figures of the sun and moon. In contrast with the clumsy ugliness of the Latin sarcophagus (Fig. 183), the Byzantine ivory is a veritable jewel. It dates from the 10th or 11th century at which time Byzantine art is characterized by an almost Hellenic sense of the innate dignity of the human body which is apparent in the graceful and self-sufficient poses of the figures. The neutral background of the relief is also in the Greek tradition. The allegorical figures are Hellenistic, however, as is also the illusionistic technique. The draperies are not represented by modelling but by a play of light and shade induced by lines incised in the broad smooth surfaces. It should be noted, however, that the play of light and shade is not utilized here to effect an illusion of spatial reality or to achieve dramatic unity, but to establish a decorative scheme in which the figures are only abstract accents in a rhythmic pattern.



(Courtesy the Metropolitan Museum)

FIG. 184.—CRUCIFIXION. METROPOLITAN MUSEUM, NEW YORK.

The Carolingian Renaissance of the 9th and 10th centuries pro-

duced very little monumental sculpture. For the most part, carving was limited to ivory covers for the manuscript books that were written in the monasteries. An exception to this statement must be made, however, for the bronze doors of St. Michael's Church at Hildesheim in Germany which were made between 1007 and 1015. They were later transferred to the Cathedral in the same city. There are two doors of eight panels each, made up of scenes relating the Genesis story from the Creation of Man through the



FIG. 185.—JUDGMENT OF ADAM AND EVE. DETAIL. BRONZE DOORS, HILDESHEIM CATHEDRAL.

Murder of Abel on the left side and the life of Christ on the right.

The most immediate impression derived from these panels (Fig. 185) is one of amazing vitality. Compared with the heavy and awkward figures on the Latin sarcophagus (Fig. 183) or the dignified ones of the Byzantine ivory (Fig. 184), those of the Hildesheim Doors are instinct with a dynamic vigor that seems almost to remove them from the relief panel. *The Judgment of Adam and Eve* is rendered with a naïve sense of the dramatic that makes the observer forget the crudely shaped bodies with their over-large heads and unarticulated limbs. The unknown sculptor's

power of characterization transcends his lack of anatomical knowledge, for there is no mistaking the significance of the threatening head and denunciatory finger of the Deity whose accusation is promptly passed on by the apprehensive Adam to Eve who in her turn shifts the blame by a gesture to the Tempter in the form of a dragon on the ground. The sense of a powerful force which animates the figures is present even in the twisted tree and the wiry foliage of the panel border. It is this sense of an abstract force which gives unity to the composition. There is obviously none of the formal or architectonic unity of Greek relief, nor the spatial unity of Hellenistic or Roman relief, nor the rhythmic, decorative unity of the Byzantine. Instead the sense of movement arising from the sheer vitality of the figures themselves seems to unite them in a common submission to some disembodied power. Technically, this effect is brought about by the linear method employed by the sculptor to delineate the various objects in the relief, as compared with the classic tradition of modelling and the Hellenistic-Byzantine dependence on effects of light and shade. This linear method of portrayal is the barbarian contribution to the artistic synthesis which was born in the First Millennium and attained its majority in the Romanesque period.

Of the three principal sculptural styles of the early Middle Ages, that of the Hildesheim Doors was the most vital. The decadence of the Latin or West Christian mode has been commented upon. In the last years of the Byzantine Empire, a similar falling-off from the level attained in the Metropolitan Museum Crucifixion is evident although a certain stiff and hieratic dignity, nearly always present even in the least accomplished examples of the Byzantine style, saves them from the ineptitude of late Latin sculpture. But it was the northern or barbarian style with its dramatic intensity and windy movement that galvanized these outworn modes into life and produced the monumental art of the Romanesque and Gothic periods, just as the fusion of the vigorous northern tribes with the exhausted Roman stock brought about the renewed spiritual and intellectual activity of the 12th and 13th centuries.

B. ROMANESQUE SCULPTURE

The renewed vitality of Western thought in the 11th and 12th centuries is apparent in sculpture as it is in all fields of human

activity. In general, it is evident in the search for a style that would be capable of giving full expression to the synthesis of thought which was then taking place. Throughout the entire period, however, and through the entire Middle Ages, sculpture did not develop as a free and independent art but was subordinated to architecture. From the beginning of the Romanesque period until the end of the Gothic, very little sculpture was produced that was not related in some way to architecture. Even when free-standing figures were carved, they were conceived in terms that imply an architectural setting, a consideration that must always be borne in mind in arriving at an evaluation of the results. The period of Romanesque sculpture corresponds rather closely to that of Romanesque architecture save for the fact that it begins a little later, the first important works coming about 1100. This was a natural consequence of its subordination to architecture for the structural problems of building required solution before resultant forms could be decorated. It comes to a close about 1200 when the Gothic style makes its appearance.

Romanesque sculptural forms have something in common with those of the Greek archaic period, the similarity between them being explained by the fact that both are the result of attempts to give expression to ideas through the medium of a limited technique. The lack of extensive knowledge of the human body on the part of the archaic sculptor has been pointed out elsewhere. The Romanesque sculptor was hardly any better off at the beginning of the 12th century for in the years that had intervened since the death of the classic tradition of figure sculpture, none comparable to it in authority had taken its place. Thus when he attempted to give expression to his ideas through the medium of the human form, he had no formulas to guide him in representing it and was forced to develop them anew. To aid him, there was his unconscious heritage from the past, embodied in the triple influence of the Roman, Byzantine and barbarian traditions which mingled in various proportions to determine the individual character of the various schools of Romanesque sculpture. These schools correspond in general to those of Romanesque architecture.

Limitation of technique is thus a characteristic common to both Greek archaic sculpture and that of the Romanesque period. The thing that makes them so different in effect is the difference between the ideals which are embodied in them. The archaic sculptor,

and all Greek sculptors for that matter, conceived their gods in the image of Man; divinity for them became concrete in the human form and perfection was attained in complete understanding of it. "Know thyself" was the aim of the Greek for in knowing himself, he also knew all that his world could mean to him. In the Middle Ages, on the other hand, God was conceived as a completely abstract being, as a spirit and so incapable of representation. He could not be comprehended intellectually but only sensed intuitively since He existed only as a supernatural principle, manifest in all things that have being and constituting the element that gives them reality. This furnishes an explanation for the naturalism of medieval art in its later phases for since all objects are in themselves a reflection to some extent of the all-embracing divine principle, it follows that they are beautiful and so worthy of portrayal. At the same time, the greatest value of the objects portrayed is symbolic since they stand for the divine principle rather than represent it. The difference between Romanesque and Gothic sculpture lies in the fact that the figures of the former are emotional symbols of reality while those of the latter are intellectual in that they form part of an ordered system by which the spirit could begin its ascent from earthly things to heavenly ones. In both cases, the complete realization of the reality that lies behind the figures can result only from an intuitive perception of it. Herein lies the essential difference between the medieval point of view and that of the classic world; in the latter, reality was understood by a process of knowing; in the former, it could be understood only by a process of feeling.

Turning now to the sculpture itself, that on the *Façade of St. Trophime* (Fig. 186) at Arles in southern France is an excellent example of the Roman influence on Romanesque art. It is not surprising that this should be so for Arles was the center of a flourishing school of sculpture in the Roman period and many Roman monuments were preserved there. These undoubtedly served as models for the medieval sculptor at St. Trophime who attempted as best he could to reproduce their forms. The subject of the portal sculpture is the Last Judgment. Christ is seated in the tympanum of the main portal with the twelve apostles seated below him on the lintel which is just visible at the right of the illustration. On the same level as the lintel is a frieze of figures representing the souls of the Saved in Paradise; a corresponding

one on the other side shows the Damned on their way to Hell. In the niches below are large figures of the Apostles and one representing the saint who established Christianity at Arles. In carving these figures, the sculptor was very obviously influenced by Roman models. The bodies are similar in pose and proportions to those on the Lateran sarcophagus (Fig. 183). Similar conventions for representing hair, eyes and drapery occur in both, and the garments worn by the Arles figures are not unlike the Roman toga. Another classic principle of design evident in the Arles

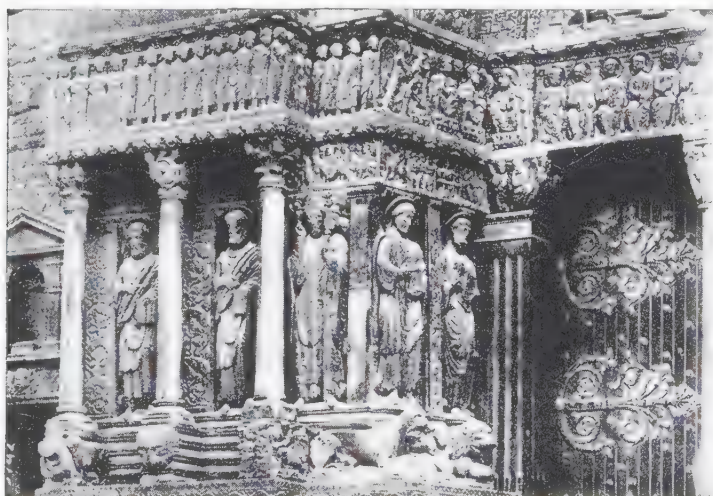


FIG. 186.—SECTION OF FAÇADE OF ST. TROPHIME, ARLES.

sculpture is isocephalism, as a result of which the heads of the standing figures of the Saved and those of the Apostles on the lintel are all on the same level. Other evidences of Roman influence are apparent in the foliage carved on the pilasters separating the large figures and in the colonnette capitals, some of which are rather good approximations of a classic Corinthian type.

Byzantine influences predominate in the sculpture on the *Main Portal of S. Nicola* at Bari (Fig. 187) in southern Italy. The Corinthianesque capitals, for example, reproduce the type employed in Byzantine buildings of the 6th century (Fig. 33) in which the leaves are suggested by a play of light and shade result-

ing from incisions in the surface of the stone rather than being modelled to project outward. The foliate design in the arch is similarly carved to produce an effect of flat, bright surfaces marked off by lines of shadow. The acanthus leaves on the stilt-block are the sharp-pointed, weedy type seen in Byzantine ornament although the egg-and-dart above it follows classic proto-



FIG. 187.—DETAIL OF MAIN PORTAL OF S. NICCOLA, BARI.

types. To the left in the illustration is the figure of an angel whose draperies are suggested by the same illusionistic technique of incised lines that has been observed in the Byzantine plaque of the Crucifixion (Fig. 184). The influence of Byzantine models upon the style of the Bari sculpture was direct, for the whole southern region of Italy had been colonized by the Greeks and it had always been in close connection with the eastern Mediterranean countries. In other parts of Europe, the Byzantine mode

seems to have affected Romanesque sculpture less directly, largely through the medium of illuminated manuscripts and ivory carvings imported from the Orient.

The third of the three basic elements that entered in the formation of the Romanesque style was the barbarian. Examples in

which it predominates can be found chiefly in France, its influence being apparent in the tremendous linear movement of the figures, both in surface detail and in outline. Such is the figure of the prophet *Isaiah* (Fig. 188) on the west wall of the church at Souillac, carved during the first half of the 12th century. As in the figures on the Hildesheim Doors (Fig. 185), the linear style results in the impression of a powerful force animating the swirling draperies and motivating the twisted posture. The immediate origin of this linear style which is seen at Hildesheim and Souillac seems to have been the pen-and-ink illustrations with which the Reims school of Carolingian manuscript illuminators decorated their books such as those in a Psalter in the University Library at Utrecht (Fig. 242).

It is easy to understand in look-



FIG. 188. THE PROPHET ISAIAH.
CHURCH, SOUILLAC.

ing at such an illustration why the pen-and-ink technique was a median of expression peculiarly appropriate to the emotional barbarian temperament. It must have been a miniature like this that the Souillac Prophet sculptor had before him as a guide. The folds of drapery that were suggested in the drawing by heavy pen strokes are rendered here by meticulously cut parallel lines. The hollow under the sweeping curve of the skirt is a painful transcription into stone of an effect that was easily secured in the original drawing by

shading. None the less, with a technique that is entirely linear, the sculptor has succeeded in achieving a very definite plasticity of form which gives even more strength to the general emotional effect generated by the ceaseless flow of the outlines and the sense of unrest in the flying draperies for which a supernatural motive must be imagined.

The nervous, animated figures of the Utrecht Psalter and the Hildesheim Doors embody the ideal of effective force which was



FIG. 189.—SIN OF ADAM AND EVE. FAÇADE, MODENA CATHEDRAL.

the specifically northern or barbarian contribution to the medieval synthesis of thought, an ideal which is given monumental form in the Souillac Prophet. The same ideal is also expressed in figures of a considerably different type, such as those which were carved on the façade of Modena Cathedral (Fig. 189) about 1100 by a sculptor called Guglielmus. The immediate origin of this figure style is also to be found in manuscript illuminations of the Carolingian period (Fig. 243) but illuminations of a type very different from those in the Utrecht Psalter. These solid figures have a static

power quite different from the dynamic energy in those of the Utrecht Psalter, and exist as plastic forms rather than linear patterns. They represent a still further modification of classic forms than that of the Arles sculpture, a modification of a type that had been developed originally to express physical or moral beauty toward one that expressed the northern ideal of effective force by giving it a racial Teutonic appearance. The head and shoulders jut forward, the gestures are clumsy and awkward but fraught with a certain power by that very awkwardness.

These characteristics appear in Guglielmus' figures of *Adam and Eve* (Fig. 189) at Modena. It is unnecessary to point out that the sculptor had little knowledge of human anatomy but this is of little importance in light of the fact that he has revived once more the sculptural ideal of plastic form which gave such significance to the carved figures of classic antiquity. However awkward these great hulking bodies may be with their clumsy hands and peasant heads, they reveal the sculptor's awareness of the innate dignity of the human body. And nowhere in Romanesque art is this idea conveyed more forcefully than in these reliefs. Handicapped though the sculptor was by his limited technique, and naïve and unsophisticated though these figures may be, they are instinct with a primitive power that fills them with life and gives significance to the sculptor's crudely embodied conception of the human form.

The method adopted by Guglielmus to attain this end is very similar to that of the classic sculptor although he did not copy classic originals in any sense. The figures appear against a neutral background with all but the essential features of the landscape eliminated, the story being told entirely by means of the figures themselves. Classic precedent also exists for the subordination of the figures to an architectural setting, standing as they do under a series of pendant arches with an occasional colonnette and surmounted by a foliate cornice. The term classic is used advisedly with no suggestion that a direct classic influence is to be seen in these figures. It means rather that Guglielmus had discovered for himself the principles that governed classic sculpture, in that he gave expression to his ideals through the medium of the human form, creating a rhythmic pattern of its masses which in turn is subordinate to the larger pattern of the architecture.

If we pause at this point in tracing the development of medieval

sculpture and glance back over the various examples of Romanesque art that have been considered, two impressions are outstanding. The first is the lack of homogeneity in the style itself. On the one hand are figures like those at Arles and Modena, heavy and solid, retaining something of classic sobriety in pose and restrained movement. On the other hand is the nervous and agitated figure of the Souillac Prophet. The apparent lack of any similarity in the conception of these figures reveals the fact that a synthesis of content and expression has not yet been achieved in medieval art. In the Arles and Modena figures, there is an attempt to embody the emotionalism characteristic of the northern temperament in forms that still smack of the intellectually attained unity of the classic ideal. In the Souillac Prophet, on the contrary, the emotional content of the figure has overflowed, swamping the form with linear movement to such an extent that its plasticity is almost lost. In both, it is obvious that the effect is due to superficial characteristics, to the movement of the drapery, to the physical bulk of the bodies, and not to an inner, spiritual comprehension intrinsic in the figures themselves. In other words, the significance or meaning of these figures is still symbolic rather than one conceived in terms of human experience.

The synthesis of form and content lacking in the earlier phases of Romanesque sculpture is attained in the figures representing the *Ancestors of Christ* (Fig. 190) on the west front of Chartres Cathedral. The part of the cathedral where they are found dates from about 1150, about fifty years earlier than the rest of the edifice. An important point of distinction from the earlier Romanesque figures is the integration of the Chartres statues with the architecture by which they appear to be a part of the building itself and not just attached to its surface. Judged by a naturalistic standard, this results in a "deformation" of the bodies, a phenomenon that is often incorrectly interpreted as indicating lack of skill on the part of the sculptor. Actually, it represents a modification of mere facts of appearance in the interests of a definite pattern by means of which the ideal embodied in the figures becomes tangible and intelligible. This the sculptor has done in all times as has been pointed out in the discussion of Greek sculpture. The difference between the patterns evolved by the Greek sculptor and those of the medieval artist is accounted for by the different ideals they sought to express; that of the Greek is concrete and

physical while that of the medieval sculptor is abstract and spiritual.

Along with the architectonic quality of the Chartres figures and the resultant abstraction of the forms, there appears another characteristic which at first sight would seem to be directly antithetical to the one just mentioned. This is a new interest in nature, evident in the treatment of the faces; the features are decidedly French and



FIG. 190.—KINGS AND QUEENS OF JUDAH. FAÇADE. CHARTRES CATHEDRAL.

differentiated in a way that indicates an extraordinarily realistic point of view. Notice, for example, the distinction between the heads of the two Queens of Judah that occupy the outermost columns in the illustration (Fig. 190). Thus in spite of the fact that the bodies exist chiefly as abstract patterns in stone, the faces are so expressive that these figures have a real and individual existence by means of which they become symbols, not of an abstract theological idea, but of a concept of life that is filled with a comprehension of human need. In this connection, it is interesting to

compare the medieval sculptor's method of investing his figures with human significance with that of the Greek. The ideal of the latter is expressed in terms of the entire body; the head is considered only as a part of it and not emphasized in any way, as is clearly demonstrated in the Three Fates (Fig. 158) where the absence of the heads does not detract materially from the meaning of the group. Significance is attained in the logical and organic structure of the bodies and by emphasizing their existence as independent and self-sufficient entities. In contrast with this method, the Chartres sculptor treats the bodies as an abstract pattern, the embodiment of a spiritual concept which is rendered concrete by the remarkable expressiveness of the faces and which attains ideal significance by relationship to the architectural background.

The sculpture at Chartres represents the final harmonization of the various elements that went to make up the Romanesque style. Two characteristics stand out among those which distinguish it from the preceding examples. The first of these is the more ordered arrangement of the figures, not only with respect to the architectural setting but in themselves. In this, there appears one of the outstanding features of later medieval thought in which the significance of all things was determined in accordance with a preconceived system. The larger significance of this fact is its indication of a point of view that is intellectual rather than purely emotional, and since medieval thought was essentially and almost exclusively religious, it indicates a faith that is rational and analytical rather than strictly intuitive. The effect of this change on Romanesque art is shown by the difference between the Souillac Prophet and the figures at Chartres. As long as the basis of Christian thought was emotional fervor, its ideals could be embodied in an art of linear movement. When it became tinged with an intellectual leaven, a greater degree of form and static strength was essential.

The second characteristic that distinguishes the sculpture at Chartres from earlier examples is its intensely human quality. There is a world of difference between the ideally youthful Kings and Queens of Judah and the meagre saints or brutal peasants that gave form to the earlier ideal. Again the change in art reflects one that took place in the religious tenets of the Church. Up to the middle of the 12th century, medieval theology was to all in-

tents and purposes the code of the Early Church fathers which was highly intellectualized and abstract. The literal and objective Middle Ages could interpret such a theology only with the aid of an emotional fervor that swept away all the obstacles placed in the way of its acceptance by naïve minds, an emotional fervor that was powerful to the point of fanaticism as in the monks who deliberately cut themselves off from their fellow men. In the latter part of the Romanesque period, a more human spirit transforms the doctrines of the Church, a phenomenon contemporary with the decline of the monasteries and the rise of the communes. From this time on, however much the ideas of art may have been determined by the Church, the forms by which they were expressed came from the minds of the people. In consequence of this, the figures themselves become more human, subject to the same laws of order as the people who carved them, and expressive of a point of view that finds significance in intellectually contrived systems rather than emotionally comprehended abstractions. It is this which brings about the more realistic art of Chartres as well as its higher degree of organization and formal discipline.

C. GOTHIC SCULPTURE

The sculpture of the west front of Chartres occupies a pivotal position in French medieval art. It is at once the culmination of the Romanesque style and the beginning of the Gothic. Characteristic features of the latter style that appear in it are the cheerful gravity of the figures which replaces the ecstasy or stolid reserve of the earlier ones, a greater naturalism and the heightened significance which results from physical as well as decorative integration with architectural setting. All of these changes are direct consequences of the shift from an emotional approach to spiritual reality of the Romanesque period to an intellectual one in the Gothic. In this respect, Gothic sculpture is one with the various other manifestations of the human creative instinct during the 13th century. In every field of activity, intellectual interpretations of experience as the preliminary to an intuitive perception of its ultimate significance took the form of complex systems in which every detail of every aspect of human experience was wrought into a comprehensive and well articulated scheme. In philosophy, this produced the scholasticism of Thomas Aquinas; in literature, the *Divine Comedy* of Dante; in architecture, the Cathedral of

which the sculptured ornament was an integral part. Even in the sculpture itself, this passion for system and order is apparent in the complex iconography or scheme that governs its arrangement. The ornament is very naturalistic, reflecting the Gothic conception of the whole world as the revelation of God's will whence it is beautiful in every detail and each individual characteristic worthy of representation. In consequence of this, Gothic



FIG. 191.—NEW TESTAMENT SCENES, SOUTH PORTAL, FAÇADE, AMIENS CATHEDRAL.

sculpture is organic and varied as Nature itself in its seeming lack of coherence but it is rendered significant by the iconography or arrangement and by its relationship to the architectural background with which it is indissolubly wedded.

Just as the transitional sculptures of the temple of Zeus at Olympia suggest the ideal which is fully attained in the Parthenon figures, so those of Chartres forecast the culmination of the Gothic style in sculpture of the early 13th century. In the decoration of the western portals of Amiens Cathedral (Fig. 58) the idea of a structural union of sculpture and architecture appears in its most

developed form. The iconography is typical of the High Gothic style. In the central portal, the Last Judgment is represented; to the observer's right is the portal of the Virgin while that on the left is dedicated to St. Firmin, the patron of Amiens. A detail of figures from the *South Portal* (Fig. 191) reveals the extent to which the High Gothic style both varies from and resembles that of the Chartres sculptures (Fig. 190). There is still very little movement in the bodies themselves. The draperies are heavier than those of the Chartres figures and fall in more plastic folds, evidence of the naturalistic trend of Gothic development. The same characteristic is apparent in the turning of the heads by which the figures are related to each other in three groups, the Annunciation, the Visitation and the Presentation in the Temple, reading from left to right. This turning of the heads and the loosening of the draperies represents a modification of the rigidity seen in the Chartres figures but the canopies over the heads serve to integrate them with the architectural setting. The heads are somewhat larger in proportion to the bodies than at Chartres, but curiously enough, they are much less sharply differentiated than are the earlier figures, being types rather than portraits.

The *Beau-Dieu of Amiens* (Fig. 192) might well be considered as the complete embodiment of the 13th century ideal. It occupies the *trumeau* or central post in the Last Judgment portal and represents Christ holding the Book of the Law in His left hand while the right is raised in benediction. Under His feet are the adder and the basilisk, symbolic of the forces of evil which He overcomes. The full draperies are arranged according to the High Gothic formula of vertical folds on one side and a cascade of horizontal ones on the other. The heavy band around the hips was a favorite device in Gothic sculpture to conceal the artist's inability to achieve correct articulation of the legs with the torso. The lack of anatomical knowledge this indicates is also evident in the absence of any suggestion of an actual body underneath the draperies. The face is modelled in large and simple planes whose broad surfaces create the effect of firm and youthful roundness which was an integral part of the robust High Gothic ideal. Gothic too is the calm, cheerful dignity of the figure, embodying a very different ideal than that seen in the Romanesque prophets (Fig. 188). Here is no fanatic threatening sinners with the tortures of Hell but a just and benevolent ruler who deals with each according to his

deserts. No single figure could better reveal the emphasis placed on the joys of Earth and Heaven in Gothic theology in contrast to the preoccupation of Romanesque thought with the punishments assured in the next life to him who sinned in this.

The fine balance between concrete naturalism and abstract decoration attained in the figures of the west front of Amiens Cathedral is characteristic of sculpture through the first half of the 13th century and is the outstanding trait of the French High Gothic style. During the second half of the century, the latent naturalism of the style becomes more prominent as in the *Vierge Dorée* of Amiens (Fig. 193) dating from about 1280, on the *trumeau* of the south transept portal. The name is derived from the fact that the figure was originally covered with gold leaf. In the hawthorne borders of the lintel, the sculptor's close observation of simpler natural forms has resulted in a quite realistic effect but one attained without sacrificing decorative unity. In the human figures, a disposition toward naturalism is also apparent but the effect falls short of the admirable synthesis that creates an ordered whole out of infinite



FIG. 192.—THE *BEAU-DIEU*, CENTRAL PORTAL, FAÇADE, AMIENS CATHEDRAL.

(Photo Levy et Neurdein)

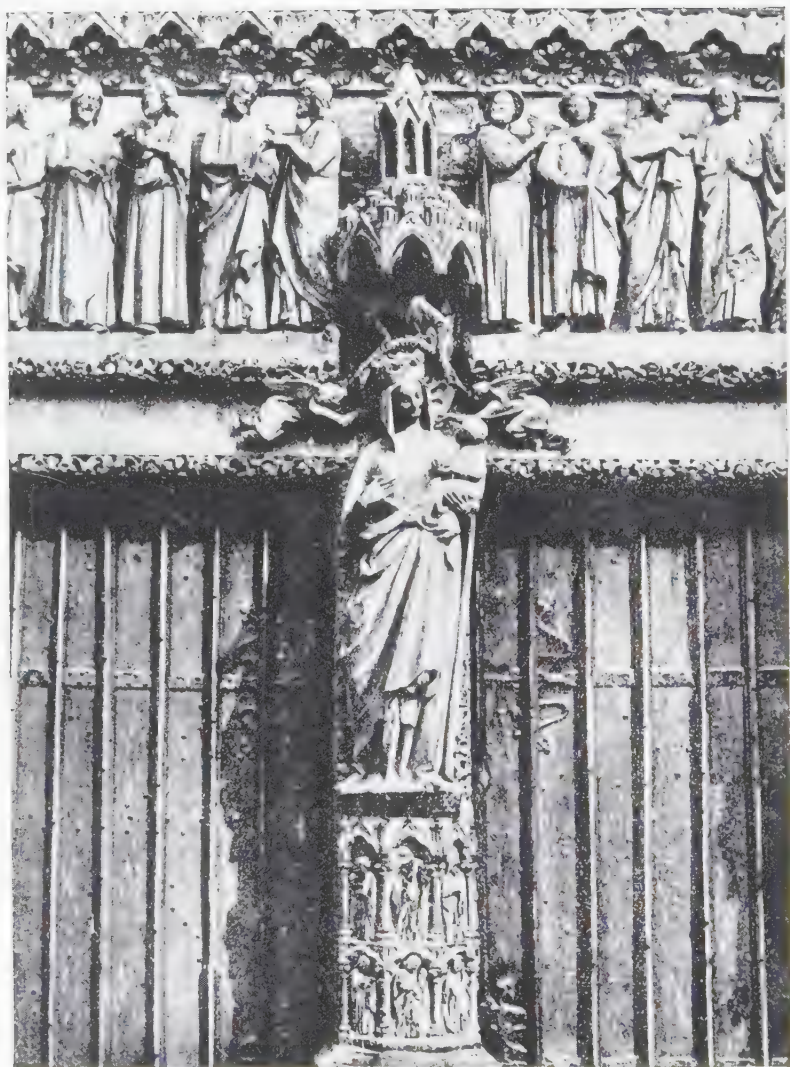


FIG. 193.—THE *VIERGE DORÉE*. SOUTH TRANSEPT PORTAL. AMIENS CATHEDRAL.

variety in the foliate borders. Two things are responsible for this. The first is the sculptor's ignorance of anatomical construction because of which it was impossible for him to make them convincing in themselves. The second is the less architectural character of the figures which was the result of attempting to make them more naturalistic. In an effort to give the bodies a realistic appearance, the sculptor resorted to mannerisms of gesture and conventions of form to compensate for their lack of convincing anatomical articulation. This is quite apparent in the Apostles on the lintel, a group of debonair figures quite different from the sturdy burghers in the same rôle on the west portals. They stand rather casually under canopies which have lost their architectural significance by being merged into a continuous border, the only motive that gives them any relation to each other being 'the light-hearted conversation that only partially occupies their attention. The effect is not convincing for the sculptor still conceives the figures in terms of architectural conventions, such as the fall and cascade of the draperies noted in the Beau-Dieu. But the significance which the earlier figure derived from its architectural setting is not so great in the later ones and the naturalism of the figures themselves is not sufficient in itself to make them convincing in another way.

The disintegration of the High Gothic architectonic style that came with a more naturalistic ideal and the attendant weakening of dogmatic content is also apparent in the Madonna. In contrast with the bourgeois ladies of the western portals (Fig. 191), the Vierge Dorée appears in the form imagined by humble minds as an aristocratic one. The noble gravity of the earlier figures is replaced by gracefulness; the concept of the Virgin as the Queen of Heaven to which a rigidly architectonic form added dignity is replaced by one of an altogether human mother. The youthful freshness of the faces in the High Gothic style is exaggerated and an attempt to attain greater expressiveness without adequate anatomical knowledge results in mannerisms such as the slanted eyes and the smile on the lips. In the body, an effort to attain gracefulness of posture produces the "hip-shot" pose with the weight of the swaying figure resting on one leg. The resultant contrast between the lines of the figure and the rigidly vertical ones of the pillar of which it is a part is the first step in the separation of sculpture from the architecture that had given it stability and significance in the High Gothic period.

In 14th century French sculpture, the mannerisms that appear in the *Vierge Dorée* continue and are exaggerated. It has already been pointed out that the spiritual content of late 13th century sculpture had been weakened by attempts to secure greater naturalism on the one hand and to evolve a standard of objective beauty intrinsic in the figures themselves on the other. In the *Virgin of Paris* (Fig. 194) in the Cathedral of Notre-Dame, the effect of

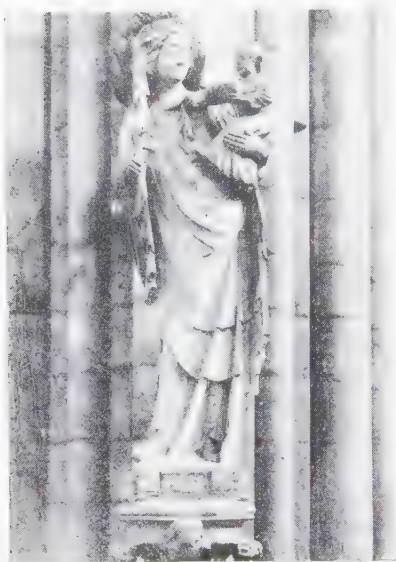


FIG. 194.—THE VIRGIN OF PARIS.
CATHEDRAL, PARIS.

substituting a purely esthetic ideal for one of religious significance becomes apparent. No pretense is made of relating it to an architectural setting. The drapery folds, which formed a discreet contrast with the rigid lines of the architecture in the High Gothic style, have become a major interest; the robes are designed as an end in themselves and form a unity quite independent of the body which is not even suggested underneath them. The human sentiment noted in the *Vierge Dorée* is here carried to the point of artificiality by the exaggeration of the pose and the childish head with its almond eyes and thin mouth whose immaturity is emphasized by the over-large crown. This affectation of pose and sentiment reveals an ideal that is devoid of any very profound meaning but none the less, the figure retains the saving grace of a certain distinction or elegance. However artificial the concept, the figure possesses style, a quality that has characterized French art ever since the Middle Ages even in its most uncreative and sterile phases. It was due to this distinction that French 14th century sculpture exerted a powerful influence on late medieval sculpture in all parts of Europe, particularly in Italy.

The mannered grace and delicacy of the *Virgin of Paris* indicates one trend in French 14th century sculpture. Another one, charac-

The mannered grace and delicacy of the *Virgin of Paris* indicates one trend in French 14th century sculpture. Another one, charac-

terized by greater naturalism, is apparent in such statues as those of Charles V and Jeanne de Bourbon in the Louvre which are fine examples of the best medieval portraiture. This tendency in 14th century sculpture also has its roots in the latent naturalism of the High Gothic style to which a stimulus was given by a desire for greater realism in sepulchral figures, a cause and effect analogous to the similar phenomena observed in Roman sculpture. The realism of 14th century art indicates better than words the relaxation of High Gothic idealism. Although it was a definite factor in native French art, the immediate source of this realistic element was in the art of the Netherlands where it had dominated the High Gothic style, in contrast to the pronounced idealism of contemporary French art. Transferred to France by a school of Flemish artists in Paris, this realistic mode soon became very popular. It appears in monumental form in the art produced in Dijon toward the end of the 14th century and during the early years of the 15th by Flemish artists attached to the court of the Dukes of Burgundy.

The outstanding example of this realistic Franco-Flemish style in sculpture is the *Well of Moses* (Fig. 195) in the erstwhile monastery of Champmol near Dijon. The illustration shows one of six figures representing prophets of the Old Testament that were carved as decorations for a well-head by the Flemish sculptor Claus Sluter (d.1405) between 1395 and 1403. The motivation is interesting. The well-head was originally the base of a carved group representing the Crucifixion. The idea of relating the Old Testament prophets to this scene came from one of the mystery plays which were so popular during the Middle Ages. The source of this particular idea was the prologue to a passion play, such as that which is recurrently celebrated at Oberammergau, in which Christ is condemned to die for Humanity by a tribunal of patriarchs and prophets who pass sentence upon Him. In the sculptured figures, the pronouncement of each judge was inscribed upon the long scroll which he holds. Moses (Fig. 195) speaks in words from the book of Exodus, "At eventide, he sacrificed a lamb before the multitude of the children of Israel." In creating this figure, from which the whole group derives its name, Sluter omitted no detail of appearance, yet it is no mere study in realism. The venerable patriarch seems to bear the weight of centuries upon

his shoulders in the realistically draped folds of the robe. The ease with which he supports them is translated in the observer's mind into an indication of intellectual as well as physical power, an impression which is furthered by the sense of superhuman vision in the piercing eyes. The only suggestion of symbolism is



FIG. 195.—CLAUS SLUTER. MOSES FROM THE WELL OF MOSES. CHARTREUSE AT CHAMPMOL, NEAR DIJON.

the horns on the forehead. The architectural background is a reminiscence of the High Gothic method of investing the figures with authority but the poses are not motivated by it. Originally, the realism of the figures was greatly intensified by color in accordance with Flemish tradition in which sculpture consisted of little more than painting in high relief. At the same time, the group is characteristically French in the powerful impression of

definite form and bulk, for the figures are conceived as sculptural forms rather than as painted images.

In Sluter's works, objective realism is transfigured and ennobled by the epic poetry of lofty conceptions. His less gifted followers were rarely able to do more than record the facts of appearance, confounding the truth of his figures with mere ugliness. As a result, they were only rarely capable of investing their own works with genuine expressiveness. In parts of France out-



FIG. 196.—THE ENTOMBMENT. HOSPITAL, TONNERRE.

side of Burgundy, as in the Loire region, the crude realism of Sluter's followers was never popular and the prevailing style was one which is only mildly naturalistic. A characteristic example is the *Holy Sepulchre* in the Hospital at Tonnerre (Fig. 196) in Burgundy which dates from 1454. The Flemish realism that is forceful to the point of harshness in the *Well of Moses* is considerably tempered here. Again the idea is derived from the *Mysteries*. The grouping of the figures around the tomb is naturalistic, based on a scene from a passion play. The carefully studied contemporary costumes reveal a similar dependence on actual models as well as the faces. This is particularly true of the Virgin, the figure in

the center, in whom a type is portrayed that is frequently found in contemporary Flemish painting. The naturalism does not detract in any way from the emotional content of the group, however, but adds poignancy to it by making it individual and specific. The sense of bitter grief and depression in these figures is conveyed by the heavy draperies whose broad folds weigh down the wearers so oppressively. The emotion of each person is focussed on the dead Christ Who thus unites the group spiritually, just as the various figures are wrought into a plastic unit by the strong horizontal accent of the corpse.

It is no exaggeration to say that the Tonnerre Holy Sepulchre represents the initial step in the final phase of French medieval art. The culmination of this phase, and in many ways the most captivating forms it produced, appear in the Champagne region. The inhabitants of that locality were of the bourgeoisie and a deep spirituality almost High Gothic in quality is apparent in their art long after the upper circles of French society had adopted the more fashionable and consciously esthetic style imported from Italy by royal order. It was this sense of the reality of spiritual experience that animated the style known as the "*détente*," meaning a relaxation of the unsparing naturalism of the 15th century Franco-Flemish manner, which apparently had its center in the city of Troyes. The *détente* ideal is beautifully portrayed in a limestone statue of a *Feminine Saint* (Fig. 197) in the Museum of Historic Art of Princeton University. It was a realistic ideal for the face is characteristically French and the drapery obviously studied from nature. At the same time, these realistic elements are generalized; they do not exist as ends in themselves but to give point to the emotional content of the figure. This in turn is expressed in a quiet and restrained fashion, very different from the unfettered manifestations of grief that are seen in the Franco-Flemish style, and indicative of a profoundly felt inner experience. The figure originally formed part of an Entombment group similar to that at Tonnerre although it is later in date, probably coming from the first quarter of the 16th century. Since the group was intended to stand in a niche, the modelling of the features is quite broad and summary, in sharply intersecting planes. Such treatment was essential to a proper effect in the relatively subdued light of a secluded interior for over-refined details would escape observation under such conditions. The generalized effect that



FIG. 197.—HEAD OF A FEMININE SAINT. PRINCETON UNIVERSITY
MUSEUM OF HISTORIC ART, PRINCETON, N. J.

results from the summary modelling invests the figure with lofty idealism, a characteristic of all *détente* art. In this quality, it is not unlike the art of the 13th century but with this significant difference, that the idealism of the High Gothic period was an impersonal and abstract one based on a theological interpretation of experience while that of the 16th century is individual and concrete and has its roots in human emotion. In giving form to this ideal in the last years of the 16th century, sculpture became once more a self-sufficient art, possessing validity in its own right. It thus recovered the individuality it had been forced to yield in being subordinated to architecture in the all-embracing Gothic synthesis of the 13th century.

Détente art was the final manifestation of the French medieval spirit and in many ways, it was the most complete and effective one of the humanizing tendency that characterized Gothic art from the outset. The lyric grace of its forms was peculiarly appropriate to the pathos of its favorite subjects but the style lacked intrinsic vigor. This vigor it might have developed but for the fact that it was overwhelmed by the powerful Italianizing style propagated by the school of art established by royal decree at Fontainebleau. The French *détente* was contemporary with the Italian High Renaissance and the winsome saints of the Troyes school gave way to athletic figures embodying the more virile but alien concepts of the southern country. Their supremacy in French art spelled the doom of the medieval tradition. Henceforward French artists were no longer concerned with giving form to spiritual ideals but to esthetic ones. The medieval spirit was dead.

CHAPTER XXI

RENAISSANCE SCULPTURE IN ITALY

THE original factor in the disintegration of the High Gothic system that occurred in the 14th century was a growing distrust of the leadership of the Church. In French sculpture, this disintegration is apparent in the separation of figures from the architectural setting which had given them abstract meaning in the High Gothic period and a lapse into mannered artificiality of pose, gesture and expression. At the same time, the interest in naturalism which was an important element in the medieval tradition continued with unabated vigor, forceful and masculine in Claus Sluter's Moses (Fig. 195), delicate and feminine and transfigured by profoundly felt personal emotion in the figures of the *détente* (Fig. 197). Both extremes reveal an interest in the Individual which is diametrically opposed to 13th century collectivism. In the 15th century, Nature was no longer viewed as a symbolic manifestation of the mystic order conceived in the minds of theologians and interpreted by scholastic thought. Instead, it was considered as a revelation of the manifold aspects of life itself, experienced directly by the Individual with a poignancy that is reflected in all the art of the 15th century, as has been seen in French *détente* figures and as will be observed in Italian ones as well. To give ideal meaning to the expression of this idea, the Northern painters had recourse to the infinite vistas of landscape (Fig. 246). In Italy, where the classic tradition had always been strong, the same end was attained in the classic manner by giving the figures significant form, *i.e.* form which in itself possesses meaning and character.

At first glance, it would seem that such an approach to the problem of giving concrete form to ideas might have resulted in the reproduction of classic figures. Actually such was not the case. The goal of classic thought and art was the determination of universal types and any individual manifestation of those types was considered only as an accidental aberration. The 15th century

began at the other end and conceived of the Universal only in terms of the particular due to its unavoidable heritage of medieval thought with its emphasis on specific and individual qualities. As a result of this, Renaissance art contains an element of dynamic force, even in its most classic aspects, which is quite foreign to the self-sufficient repose that had been the ideal of classic antiquity. 15th century thought was much more complex than that of the

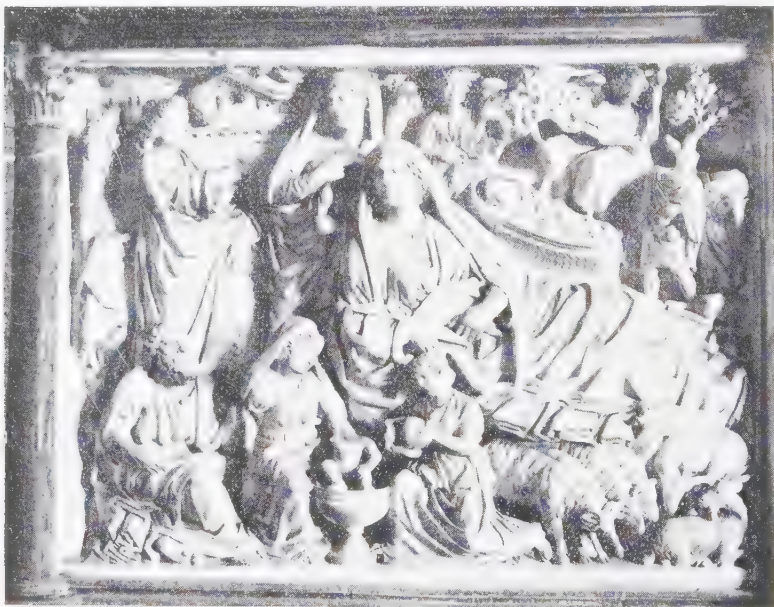


FIG. 198.—NICCOLO PISANO. THE NATIVITY. DETAIL. PULPIT OF THE BAPTISTERY OF PISA.

fifth century, and its full expression could not be embodied in forms whose very existence depended upon a process of generalization and simplification.

This is clearly revealed by an attempt to employ classic forms that took place in Italy in the 13th century. When Niccolo Pisano (c.1205?-1278?) constructed a monumental pulpit for the Baptistery of Pisa in 1260, he decorated it with a series of panels carved with the story of the New Testament. The pulpit was a hexagonal box supported by Corinthian colonnettes and reached by

a flight of steps leading to one side which was left open. On the first of the five remaining sides, the *Nativity* is represented (Fig. 198). Niccolo employed classic types in the figures. The Virgin reclines on her couch in the guise of a dignified Roman matron. The angel of the Annunciation at the left is a youth clad in a Roman toga, reproducing a type often found on late Latin sarcophagi. The formulas of hair and drapery came from the same



FIG. 199.—GIOVANNI PISANO. THE NATIVITY. DETAIL. PULPIT OF SANT'ANDREA, PISTOIA.

source, notably the manner in which Joseph's beard is represented in tight curls with a drill hole in the center of each one, as well as the broad angular folds of the robes. The figures are generalized and the composition is simple with its quiet vertical and horizontal accents, both contributing to a classic sense of repose. At the same time, there is an intensity in the expression of the annunciate angel which reveals Niccolo's discontent with his classicizing forms as a medium of conveying the emotional significance of the subject. It is clear from this that he was no precursor of the Renaissance as he has sometimes been called. The idea underlying his

representation of the Nativity is still medieval and its forms are only incidentally cast in a classic mould.

How little the 13th century was prepared to give expression to its thought in classic terms even in Italy is shown by the work of Niccolò Pisano's son Giovanni (c.1250-c.1317). In a pulpit which he made for the church of Sant'Andrea at Pistoia between 1298 and 1301, he reproduced the general form and subject matter of the Pisa Baptistery pulpit but the similarity between the two works goes no farther than that. Giovanni's *Nativity* (Fig. 199) is a scene of tremendous agitation in contrast with the calm of Niccolò's. This effect is created by the predominantly diagonal accents of the composition as well as by the sense of movement in the figures themselves. The angel of the Annunciation rushes into the presence of the Virgin who shrinks before him. The Madonna reaches out to lift the covering of the infant Jesus with a gesture eloquently expressive of a mother's concern for her first-born. The midwives are almost painfully intent upon their duties, while Joseph, who sits stolidly at one side in Niccolò's version of the scene, is rendered as a figure of moving intensity striving to comprehend the significance of the mystery that has taken place. The style of the figures shows the influence of late medieval sculpture in France in the contrasting broad simplified areas and the involved folds of the draperies. The robe of the annunciate Virgin is arranged according to the medieval method of fall and cascade but it is motivated by the action of the shrinking body and the left hand which grasps the skirt. Comparison of this figure with the Virgin of Paris (Fig. 194) will show how the Italian sculptor has filled the Gothic formula with meaning by giving a reason for the drapery effect. The French figure is artificial and mannered, its gestures merely quaint and ingenuous. The Italian figure, on the other hand, is informed with profound intent and tragic sensibility, and moves as the protagonist of a powerfully emotional drama. The gestures are somewhat over-emphatic, it is true, nor are they as convincing as more extensive anatomical knowledge would have made them. None the less, where the contortions of the Virgin of Paris are simply characteristics of an affected ideal of elegance and grace, the movement of Giovanni's Madonna is expressive of sincerely felt emotion.

Italian sculpture of the 14th century followed, in general, the

path indicated by Giovanni's work. In Italian hands, the modish figures of the late Gothic style in France acquired ideal significance by virtue of the Italian heritage of the classic tradition of expressive form. The meaningless gestures of the French figures were invested with genuine meaning by making them indicative of deeply felt emotion. Thus in Italy of the 14th century as well as in France, sculpture was developing a style that would give adequate expression to the personal and individual interpretation of experience that was appearing in consequence of the breakdown of the High Gothic synthesis.

A. THE EARLY RENAISSANCE

Toward the beginning of the 15th century, two new factors served to modify the hitherto basically medieval forms of Italian sculpture. These were the growing practice of direct imitation of classic forms and a renewed interest in realism that appeared as a result of northern influence. Both of these tendencies appear very extensively in Early Renaissance sculpture. The interest in classic art may be traced to the affinity between Renaissance humanism and antique thought with its exclusive preoccupation with human values. But at the same time, Renaissance humanism also led to the development of a genuine spirit of scientific curiosity which found much to intrigue it in the naturalism that characterized the closing phases of northern medieval art. However, the approach of the 15th century to Nature was very different from that of the Middle Ages in that it was analytical rather than synthetic. The existing facts of the world were studied for their own sake, not as symbols of a divine order. Not the least important result of this attitude was the reappearance in sculpture of the nude human figure as a subject for monumental treatment. Its use had been limited in the theological art of the Middle Ages to a very few themes and rarely if ever appeared in statues in the round.

In the work of Lorenzo Ghiberti (1378-1455), one of the three outstanding sculptors of the Early Renaissance in Italy, an interest in classic forms is quite evident. Ghiberti first won distinction as the victor in a competition held in his native city of Florence in 1401 for the honor of creating a pair of bronze doors for the Baptistery of San Giovanni. In this competition, his chief opponent was Brunellesco whose failure to win it was instrumental in causing him to turn his attention to architecture as a field of

endeavor. The two sculptors were required to present their own versions of the same subject, Abraham's Sacrifice of Isaac, as a basis for judgment, and the panels are preserved today in the Cathedral Museum in Florence. Of the two, Brunellesco's is the more mediæval, particularly in the diffusion of interest apparent in the composition, the lack of spatial effects and the dramatic intensity of the protagonists. In contrast with Brunellesco's panel, there is unity of interest in Ghiberti's, the result of well-suggested space and a modification of dramatic content in the interest of greater decorativeness. The doors which Ghiberti designed relate the Life of Christ and are felt by some critics to fall short of the competitive panel in achievement as they contain many mediæval stylistic traits. Whatever the judgment of posterity, they were received with great acclaim when Ghiberti finished them in 1423 and they were placed in the eastern portal of the Baptistery.

The following year, Ghiberti was commissioned to execute another pair of doors for the same building which he fashioned between 1425 and 1447. Upon completion, they replaced the first set in the eastern portal of the Baptistery, the other doors being moved to the southern entrance. In the panels of the second doors, called the *Gates of Paradise* (Fig. 200) by Michelangelo, Ghiberti produced a masterpiece of relief sculpture which has never been surpassed for sheer technical skill and has served as a model for such projects ever since. The subject laid down for Ghiberti was a symbolic parallel of Old and New Testament subjects, a typically mediæval concept. With characteristic Renaissance individualism, Ghiberti rejected this scheme and imposed one of his own upon the guild in charge of the work. In ten large panels, the Old Testament story is told from the Creation of Man to the Meeting of Solomon and the Queen of Sheba, beginning in the upper left corner and reading across both valves of the portal, each relief being devoted to one character or group of characters although a number of them relate more than one incident. There are two episodes in the *Story of Abraham* (Fig. 201) which appears in the second panel from the top on the right side, the visit of the three angels and the sacrifice of Isaac. To attain unity in the representation in one composition of two subjects unrelated in time, Ghiberti portrayed them against a magnificently wrought landscape background which brings the two incidents together by establishing a single volume of space in which they

take place. This sense of space in the panel is the result of variations in the depth of the relief planes ranging from great projec-



FIG. 200.—GHIBERTI. THE "GATES OF PARADISE." EAST PORTAL. BAPTISTERY FLORENCE.

tion in the foreground figures which are almost free-standing to hardly perceptible lines in the distant ones. The result of this is

an impression of air circulating around the figures themselves, an effect similar to that obtained by the same means in the Arch of Titus reliefs (Fig. 181). The greater realism of Ghiberti's relief as compared with the Roman ones is due to his knowledge of the laws of perspective that had been codified by his rival Brunellesco. His rather naïve pride in this knowledge is indicated by the way in which the donkey in the immediate foreground stands with his rump pointing toward the observer



FIG. 201.—GHIBERTI. THE STORY OF ABRAHAM. DETAIL OF "THE GATES OF PARADISE." EAST PORTAL. BAPTISTERY, FLORENCE.

providing the artist with an excuse to demonstrate his skill in foreshortening.

The style of the human figures reveals Ghiberti as standing between the medieval and classic traditions. In the small niche to the left of the Abraham panel, there is a feminine figure representing one of the pagan sibyls who foretold the coming of Christ. The pose is the "hip-shot" one of the 14th century Gothic style, nor is there an effective correlation of the body and drapery. In the lovely group of the three angels, the anatomical construction is still far from being accurate, but this is overlooked in the

stately rhythm of their progress toward the kneeling patriarch, a rhythm which is repeated in the row of trees in the middle distance. Such details reveal the extent to which Ghiberti had reacted to the decorative quality of classic art. In the nude male figure in the niche to the right of the panel, his dependence on classic prototypes is even more apparent. It represents Samson whom Ghiberti portrays in the guise of a Hercules of Praxitelean pose and Roman muscularity. In spite of such classic elements, Ghiberti's medieval background is apparent in such things as the bushy hair and small skull of the Samson, traits which appear in 13th and 14th century Gothic art. The mixture of floral and animal motives in the border surrounding the whole portal is also medieval rather than classic in that it is conceived in terms that are linear and not plastic.

In the final analysis, Ghiberti's classicism was more or less incidental to a style which was fundamentally medieval. In nothing is this shown more clearly than his employment of landscape and architectural backgrounds to give meaning to his reliefs, depending upon their heroic character to invest the representation of the Old Testament legends with the significance which he could not suggest in the figures themselves. How little Ghiberti was capable of informing the figures with character is apparent in the meaningless and rhetorical gestures in such dramatic scenes as the Expulsion of Adam and Eve from the Garden of Eden. Instead of attempting to make his figures other than decorative, he creates a sense of awe in the spectator by the epic grandeur of the deep backgrounds which his incomparable command of relief made so convincingly real. The panels are thus effective as ensembles rather than from the intrinsic character of the individual figures, a conception which is as medieval as the decorative scheme of a Gothic cathedral.

In the sculpture of Jacopo della Quercia (1371-1438), there is a very different concept of the human form than Ghiberti's decorative one. In creating the *Sin of Adam and Eve* (Fig. 202) on the main portal of S. Petronio at Bologna, which dates between 1425 and 1438, Jacopo reverted directly to classic methods by suppressing the background almost entirely, telling the story by the figures alone. As a result, they acquire heroic importance, just as do the crudely powerful figures by Guglielmus on the façade of Modena Cathedral (Fig. 189). The tragic import of the scene is

thus conveyed directly to the observer instead of indirectly and vaguely as in the case of Ghiberti's landscape backgrounds. The hip-shot pose is a medieval reminiscence but it is motivated by



FIG. 202.—JACOPO DELLA QUERCIA. SIN OF ADAM AND EVE. MAIN PORTAL, S. PETRONIO, BOLOGNA.

the sense of horror in Adam and Eve's seductive pleading. The proportions of the figures and the treatment of the muscles show the influence of antique models, but the personal and dramatic note is entirely Renaissance in spirit.

It cannot be denied that Jacopo's figures have certain faults.

His knowledge of anatomy and sense of form were not sufficient to give them weight or convincing movement. In the technique of relief carving, he was not the equal of Ghiberti as is apparent in his failure to suggest the space that exists between the near and distant legs, or to achieve a satisfactory spatial relationship between Adam's right arm, his body and the tree around which the snake is entwined. But the concept of life revealed by these figures is lofty and dignified, and Jacopo's limited technique does not obscure it any more than the restricted methods of the Romanesque sculptor could stifle the emotion he sought to express. In regarding backgrounds and accessories as so many hindrances to clear expression and in giving form to his ideas by the human figure alone, Jacopo is closer in spirit to Greek methods than to Roman ones. Whence he derived this manner, which is unique in the early 15th century, it is impossible to say. But his contemporaries and immediate successors failed to realize its potentialities and not until Michelangelo appeared in the early years of the 16th century was it developed to the fullest possible extent.

The influence of classic art upon Ghiberti and Jacopo della Quercia is quite evident, each reacting to it according to his own nature. Ghiberti, the decorator, saw the formal beauty of its rhythmic patterns, while Jacopo was chiefly impressed by its great expressiveness. Neither one was wholly successful, however, in developing forms possessing these qualities which were capable at the same time of giving full expression to the thought of their own age. This is explained by the fact that neither one was technically equipped to give his figures the concreteness which has ever been the ideal of scientifically minded ages such as the Renaissance. We have seen that Ghiberti was unable to make his figures act convincingly and that Jacopo's do not give the impression of having weight commensurate with their physical size. In both cases, the sculptors lacked the knowledge of human anatomy necessary to a portrayal of the human body that would carry conviction to the observer. It was the acquisition of this scientific knowledge that made Donatello (1386-1466) one of the most important figures in Early Renaissance art. During his long career, he posed nearly every problem connected with the objective portrayal of the human body and solved a great many of them. He was enabled to do this by his study of the mechanics of the body and on the basis of the knowledge thus acquired, to adapt the classic idiom to forms

that were capable of giving adequate expression to the complicated involutions of modern, Christian thought. In so doing, Donatello established himself as the outstanding sculptor of the early 15th century, his only equal as an artistic personality being the painter Masaccio who was carrying on similar investigations in his field of endeavor. These two men completely dominated the art of their time.



FIG. 203.—DONATELLO. "LO ZUC-
CONE." CAMPANILE, FLORENCE.

One of the earliest incidents in Donatello's career was his journey to Rome with the disgruntled Brunellesco in 1403. Although he must have come in contact with many examples of Roman art during the years he was there, his style seems to have been very little affected by them. His earliest known works are two statues for the north portal of the Cathedral of Florence, executed between 1406 and 1408, in which the figures are still conceived in the Gothic manner. Around 1410, Donatello conducted a series of experiments with classic forms without producing any very important results, but about 1416, a series of works characterized by most intense realism began to appear. The figure called "*Lo*

Zuccone" or Pumpkin-head from the bald pate (Fig. 203) is one of these works which were carved for the niches in the Cathedral Campanile in Florence (Fig. 67). The highly individualized features of the head and the draperies show the impatience which Donatello always felt for meaningless generalization and are characteristic of the apparent cult of ugliness that is almost invariably found in the early stages of a realistic art. Donatello did not hesitate to portray every detail of the powerful figure however short they fell of an abstract standard of beauty. But the tensed muscles of the neck, the bent right wrist, the strong hands instinct

with power and the crumpled folds of the drapery create an impression of vital force that transfigures the repellent face, while the shadow over the eyes introduces a note of abstraction. The effect is to suggest a spirit emanating from the figure itself which distinguishes Renaissance realism from that of the Franco-Flemish style, typified by Sluter's Moses (Fig. 196) whose meaning is conveyed in the medieval way by the accessory draperies. But with all its realism, the Zuccone shows Donatello's familiarity with classic formulas in the lowered shoulder above the leg supporting the weight of the body, a formula which he employs to heighten the sense of power in the figure itself by the *contrapposto* or twist that it creates.

During the latter part of the 1420's, Donatello executed commissions in various parts of Italy and it seems probable that his travels brought him once more in contact with examples of classic art. The effect of this contact is apparent in a group representing *The Annunciation* (Fig. 204), made between 1426 and 1433 for the church of Santa Croce in Florence, in which the extravagant realism of the Zuccone has been tempered by a degree of antique idealism. The background and the architecture of the niche reveal many classic motives. The head of the Virgin is almost Greek in its purity of line and the arrangement of the features, but invested, by virtue of Donatello's sense of the concrete, with a humanness of expression that is rarely absent even from his most decorative works. Also classic is the drapery treatment, the robes revealing the bodies underneath yet instinct with a vitality of their own. In the nude cherubs or *putti* at the ends of the entablature, one of the favorite subjects of the Renaissance artist appears, a theme which gave ample opportunity for realistic treatment of the chubby, childish bodies and their abandoned movement.

In the two examples of Donatello's sculpture that have been considered, we can observe two of the outstanding traits of Italian Renaissance humanistic thought, an interest in classic art and a realistic conception of the human body. Progressing along these lines, it was inevitable that Donatello should come to realize that the highest achievement of sculpture is the portrayal of the undraped human figure. One of his earliest nude figures, a Crucified Christ in wood made about 1420, is notable for the relentless realism which led the outspoken Brunellesco to characterize it as a peasant's conception of the Savior. As a figure to

be seen from only one point of view the Crucifixion is still in the medieval tradition which almost invariably limited the nude to treatment in relief. The bronze *David* (Fig. 205), which dates from about 1430, breaks sharply with that tradition by being in the round, and in representing the youthful figure unclothed,



FIG. 204.—DONATELLO. ANNUNCIATION. S. CROCE, FLORENCE.

Donatello created the first free-standing nude figure of monumental character since classic antiquity. His debt to antique concepts is apparent in the quietness of the figure and its lack of tension, as well as in the pose, the body being supported by one leg while the other one is relaxed. The modelling is generalized but there are some specific and individual details; the most apparent are the thin arms and the bony protuberance of the right

hip which creates an awkward angle in the outline of the figure. Both of these are features of the undeveloped adolescent body observed by Donatello's realistic eye. The hat, similar to those worn by Tuscan shepherd lads, is another specific detail which is rather disquieting in the predominant generalization. It casts a shadow over the face which again is unclassic in effect, creating as it does a sense of thought which is personal and individual. The



FIG. 205.—DONATELLO. DAVID. BARGELLO, FLORENCE.

mixture of concreteness and generalization in the figure is a direct cause of the extraordinary impression of nudity it creates.

Donatello's best-known work is the statue to the Venetian general *Gattamelata* (Fig. 206) in Padua, in which he revived another sculptural type that had disappeared in the Middle Ages, the equestrian figure. It is based on classic prototypes, the most immediate one being the statue of Marcus Aurelius on the Capitoline Hill in Rome (Fig. 82), which Donatello had doubtless seen. The quietness and repose of the group is classic in effect, attained by

the broad planes delineating the massive volumes and the balanced design of the group as a whole. The triangles formed by the horse's legs support the heavy body which is a horizontal accent in the arrangement, contrasted with the vertical of the rider and one sharp diagonal in the line formed by the sword and the general's baton. The ball under the left front hoof is introduced to assure the stability of the group, decoratively as well as in



FIG. 206.—DONATELLO. GATTAMELATA. PADUA.

actuality for it prevents the horse from seeming to march off the pedestal in addition to maintaining its physical equilibrium. In solving the problem of the equestrian statue, which is one of the most difficult in sculpture, Donatello investigated the anatomy of the horse with the same scientific spirit that is evident in his realistic treatment of the human figure. The veins of the legs and the nose are portrayed very specifically as well as the peculiar bony structure of the skull. Equally realistic is the contrast be-

tween the different textures of horse's hide, saddle blanket and armor. The horse itself is of the heavy draft type and seems somewhat overlarge in proportion to the size of the rider. This, too, is a realistic detail for a smaller horse could not support the weight of a grown man in full armor. The apparent disproportion in the group results in partial failure of the human figure to dominate it as he should. To offset this effect to some extent, the sculptor has sought to emphasize the importance of the rider by a wealth of minute detail on the armor and by the putti playing on the saddle behind him, details which attract the observer's attention away from the more generalized charger. The putti are a classic motive as are also the winged genii on the relief decorating the pedestal.

As stated above, Donatello followed classic prototypes in the Gattamelata, but as we have seen in his other works, he used the classic form to give expression to concepts which are quite different from those of the antique. Thus in the Gattamelata, he has suggested in the face something of the wily mind whose successful military strategy won for its owner the nickname of "honeyed cat," introducing a concrete and personal note in the prevailing generalization by the fixed, steady glance of the eyes. The greatness of the figure lies in its transcendence of specific details; it is a type rather than an individual. The statue represents Erasmo da Narni, but it does more than represent him for it suggests his subtle and crafty mind.

Donatello towers head and shoulders above his contemporaries for the reason that his work is the complete embodiment of the Early Renaissance spirit. His achievements cannot be summed up in a phrase, as can Ghiberti's by graceful decoration and Jacopo della Quercia's by robust power; his genius was too great to be restricted to a single mode. He found sculpture still in the grip of medieval thought and restricted by medieval technique; he left it a powerful instrument, capable of expressing the widely varied ideals of the Renaissance, its apprehension of the antique, its realism which is so concrete and modern in its intellectuality, and above all, the enthusiasm with which it regarded the drama of Life with its joy and pain, the drama which had been so long obscured by the veil of medieval mystic symbolism.

During the second half of the 15th century, two trends can be distinguished in Florentine sculpture, both originating in

Donatello's style. One is a search for lyric beauty, the other a tendency toward drastic realism that developed out of the scientific aspect of Donatello's art. An example of the latter is a portrait bust of the Florentine philosopher *Matteo Palmieri* (Fig. 207), modelled in 1468 by Antonio Rossellino (1427-1478). There was no attempt to idealize the homely features which were probably reproduced, as in Roman portraits, from a death mask. Moreover, there was no wish to modify specific qualities, for the naive pleasure of the Early Renaissance in its newly-realized ability

to represent the actual appearance of things was still too keen to permit any generalization. It was not until the end of the century that an effort was made to determine an ideal aspect of the aged face in Leonardo's work; up to that time, in the hands of the realists, it was simply ugly.



FIG. 207.—ANTONIO ROSSELLINO.
MATTEO PALMIERI. BARGELLO,
FLORENCE.

The other tendency in Florentine sculpture, toward an expression of lyric feeling, found its outlet in youthful or feminine forms, in contrast to the male portraits preferred by the realists. One of the most ingratiating examples of this lyric style is a relief of the *Virgin and Child*

(Fig. 208) by Desiderio da Settignano (1428-1464). As a pupil of Donatello, Desiderio inherited from his master something of the honesty of observation that appears in the older man's style, and also the technical skill that makes his linear low relief such an expressive vehicle of tender sentiment. The aristocratic elegance of Desiderio's figures is a personal characteristic in which he differs from the best-known of the 15th century lyric sculptors, Luca della Robbia (1400-82). Luca's career fell chiefly in the early years of the century but in the sturdy, almost rustic types he portrays, the gentle charm emphasized in the later period is anticipated. His favorite subject was the Madonna and Child which he never tired of representing in plaques made of the glazed terra-cotta with which his

name is associated. The technique of these plaques was one that lent itself to broadly generalized effects rather than the specific and concrete ones obtainable in bronze or marble and was thus well adapted to the conveyance of an ideal of tenderness and grace.

These characteristics appear even in portraits of the last half of the 15th century when they are of feminine rather than masculine subjects. Such is the marble bust of *Beatrice of Aragon*



FIG. 208.—DESIDERIO DA SETTIGNANO. MADONNA AND CHILD.
PANCIAITICHI PALACE, FLORENCE.

(Fig. 209), the fourth daughter of Ferdinand I, King of Naples, carved by Francesco Laurana (c.1425-c.1502) about 1471. It is realistic in so far as it portrays the fashionable lady of the time in the slender neck, sloping shoulders, plucked eyebrows and shaven forehead, the type immortalized by Leonardo da Vinci in the *Mona Lisa*. The realism of these details was accented by that of the colored hair and the gold inlay in the Cufic letters that form the garment borders. The classic taste of the period is reflected in the nymphs and volutes on the base. The features are generalized to the point of impersonality, but this may have been

the result of an attempt to suggest the courtly and aristocratic bearing of the subject. The half-closed eyes are a trait which has been observed in the ultra-sophisticated Virgins of French 14th century sculpture (Fig. 194) where it is also the hallmark of a fashionable type. But the subtle modelling of the marble to sug-



FIG. 209.—LAURANA. BEATRICE OF ARAGON. KAISER FRIEDRICH MUSEUM, BERLIN.

gest the smooth lustre of youthful flesh and the sly demureness of the expression invest the Laurana bust with a concreteness that is very different in effect from the artificial mannerism of the earlier figure.

By contrast with the lyric beauty that appears in the work of Desiderio da Settignano and Laurana, the unsparing realism that characterizes the figures of their more scientific contemporaries is all the more striking. It represents a logical continuation of

Donatello's tradition of scientific curiosity in that it led to searching investigations into the structure of the human body. Thus in the statuette of *Hercules and Antæus* (Fig. 210), Antonio Pollaiuolo (1432-98) attempted to solve the problem of representing muscular movement in a convincing fashion. Like most of the scientific realists, he preferred to work in bronze for the greater accuracy in detail it made possible, and in the statuette, he has



FIG. 210.—ANTONIO POLLAIUOLO. HERCULES AND ANTÆUS. BARGELLO, FLORENCE.

rendered the muscular organization of the struggling giants with great faithfulness. In the hands of a lesser man, this might have resulted in the dryness of an academic study, but Pollaiuolo succeeded in giving the figures character by the tremendous energy with which he has endowed them. Although the group stands only a few inches high, it radiates a dynamic force that raises it far above the level of a mere *tour de force* of representation.

Andrea Verrocchio (1435-88) is another representative of the scientific trend in Florentine sculpture of the late 15th century.

His interest in anatomy is shown by a bronze *David* (Fig. 211) which he made about 1465 for the Medici family in which he has so emphasized the bony structure of the spare adolescent figure that the ribs show through the hard leather corselet. Any tendency that Verrocchio may have had in the direction of classic idealization was very effectively stifled by this naturalistic interest, a fact which is demonstrated by comparing his *David* with Donatello's



FIG. 211. —VERROCCHIO. DAVID, BARGELLO, FLORENCE.

(Fig. 205). For the broad planes of the earlier work, Verrocchio substituted a succession of angular ones. The bent left arm which balanced the classic rhythm of the figure in Donatello's *David* has become a harsh demonstration of accurate anatomical knowledge. This contrast in details gives a clue to the temperamental differences between the two men. Donatello wished to endow his figure with the decorative quality he had observed in antique sculpture; Verrocchio desired only to represent his patrician ideal with stark reality and to this end, he spared no characteristic of the hard

boniness of the adolescent boy. The numerous minute planes of the modelling create a sense of nervous vitality in the figure which is emphasized by the momentary expression on the face and the slight turn of the head.

Similar characteristics appear in Verrocchio's equestrian statue of *Colleoni* (Fig. 212) in Venice. A comparison with Donatello's *Gattamelata* (Fig. 206) will show even more clearly than the



FIG. 212.—VERROCCHIO. COLLEONI. VENICE.

foregoing discussion of the two Davids the changes that occurred in sculpture during the course of 15th century. Donatello is under the spell of the classic, endowing his figure with a force that is potential and intellectual and clothing it with the form of a Roman general. Verrocchio, on the other hand, has all that the 15th century had learned of emotional expression at his command and his figure is alive with kinetic force, an impression arising from the sense of general movement created by the innumerable planes of the modelling. The pose of the rider contributes to this

effect also. In contrast with the easy relaxation of Gattamelata, Colleoni stands erect in the stirrups with his body turned to the right although he is glancing to the other side. The steed is highly spirited, quite different from the heavy animal bestridden by Donatello's general, yet he is effectively dominated by his rider. His forward movement is controlled by the backward pull on the mouth as indicated by the creases in the neck, thus attaining directly the balance of opposed forces essential to decorative stability that Donatello could bring about only indirectly by the ball under the horse's front hoof. Psychologically, Donatello's work is superior. It conveys the shrewd personality of the mercenary warrior more effectively than Verrocchio's figure. But as an embodiment of the fiery passion of the warrior, the theatrical pose and defiant expression of Verrocchio's statue undoubtedly surpasses the more restrained Gattamelata. The savage spirit of Colleoni, very different from the cool passionless intellectualism of Donatello's general, is conveyed directly to the observer by the grim face, the absolute control of the rider over his mount and the suggestion of tremendous power in the twist of the body.

Verrocchio was the last great sculptor of the Early Renaissance in Italy and in his work, much of the indiscriminate love of life that characterizes the entire period and which explains the intense interest of its artists in natural forms can be found. During the early years of the 15th century, the expression of this interest was somewhat tempered by the feeling, unconsciously inherited from the Middle Ages, of a need for universal significance. It was that feeling that led Ghiberti to place his Old Testament scenes in the midst of heroic landscapes from which the decorative figures might indirectly acquire an authority they did not possess in themselves. It is apparent in the lofty conception of the human figure that transcends the technical limitations of Jacopo della Quercia's style, and in the personal, intellectual note in Donatello's manner. But the deep undertones of medieval thought became fainter with the progress of time; even in Donatello's last works, the classic balance of the Annunciation and the Gattamelata gives way to unrestrained emotionalism. Furthermore, the example of Donatello himself had stimulated a scientific interest in the exact portrayal of the human body which, combined with the fascination intrinsic in representing things as they actually appear to be, served to create an increasing fondness for natural forms for their own sake which

appears in its most characteristic aspect in the male portraits (Fig. 207). The implication of this attitude is that all that is natural is therefore good in its own right. This cult of the natural was not limited to 15th century sculpture; it is evident in painting also, and underlies Lorenzo de' Medici's *Canzoni*. Its connotation of personal and individual values as criteria appears even in what political theory existed at the time, the only ideal being achievement of personal ambition without regard for the good of community or state. The consequence of such a mode of thought was that which inevitably follows in the train of a philosophy whose highest ideals are expressed in purely physical terms—moral decay. In Florence, this is manifest in the wanton festivals which alternated with periods of bitter armed strife, both of which so weakened the city that it fell an easy prey to Charles VIII of France when he invaded Italy in 1494 after the Medici had been exiled. The leading position in 15th century European thought that Florence had attained under their benevolent tyranny was lost, never to be recovered, for the increasing power of the Papacy made Rome the center of the most important intellectual activity in Italy during the early years of the 16th century or the High Renaissance.

B. THE HIGH RENAISSANCE

The second phase of the Renaissance in Italy falls in the first half of the 16th century. It is differentiated from the earlier one by the term High Renaissance and is distinguished by a reaction against the excesses to which the naturalistic thought of the 15th century had led. This reaction had already set in before the beginning of the 16th century. It appears in the temporary transformation of the libertine morals of Florence into a puritanically austere mode of conduct as a result of Savonarola's wrathful fulminations. In painting, it is evident in the discontent with 15th century formulas that Botticelli expresses in the wistful sadness of his Virgins and pagan goddesses, and in the simplification of forms and compositions that characterizes Leonardo's work. In sculpture, it is apparent in such characteristics as in the superior formal qualities of Verrocchio's Colleoni when compared with the earlier Gattamelata.

The important feature of this reaction is its indication of a growing feeling that modes of conduct and forms of artistic ex-

pression should have greater authority than that of an entirely personal or individual point of view. It was this feeling that led the High Renaissance to search for ideals that would have universal meaning and which led its artists to evolve forms that would be capable of giving concrete expression to those ideals. In some cases, they sought to solve this problem by close reproduction of antique forms which seemed to be adapted to the desired end by virtue of their generalizations. This proved unfruitful, for the 16th century heritage of Early Renaissance individualism was inescapable. Because of it, the only available path to universal truth lay through the Individual whereas classic thought had attained that end by beginning with generalization. Its artistic forms were thus fundamentally incapable of expressing Renaissance thought. As the Renaissance could understand the universal only in terms of the particular, it had to be attained by means that were intrinsic in the particular. This is the direct cause of the restlessness that characterizes all the great art of the period for the straining away from life on an ordinary plane to the higher one where universal truths are realized left its mark on the style. In contrast to Greek art, with which that of the High Renaissance is often compared and which acts on the observer as a soothing anodyne descending from the heights of ethereal beauty, art of the 16th century seems to reach out to him by its concreteness and to transmute the base material of his experience into golden beauty by the intense fire of sheer physical and intellectual force.

The dominant personality in High Renaissance sculpture is Michelangelo Buonarroti (1475-1564) in whose works the spirit of the time is completely embodied. He was a man of amazing versatility being architect, sculptor, painter, poet and engineer, but of all the fields in which he worked, sculpture was the most congenial to him. In his earliest figures, a relationship to 15th century art is apparent. The *David* (Fig. 213) of 1504 shows unmistakable traces of Donatello's style, the hooked wrist of the right hand, to mention but one, which has been noted in the Zuccone (Fig. 203). The detailed anatomical rendering and the fixed glance of the eyes are also 15th century characteristics. But the face, for all its concreteness of expression, is an idealized type, and one which reappears in later works. The great size of the figure (it stands eighteen feet in height) reveals another method employed by the High Renaissance to attain ideality, the mag-

nification of physical proportions. Still a third High Renaissance characteristic is the sense of strain in the figure which is created by exaggerating the different levels of the shoulders and the tenseness of the neck muscles that results from turning the head toward the left or raised side of the body. The impression of unrest thus created is emphasized by the arrangement of the figure in two contrasted planes, the torso and head against the legs. This should be compared with a classic statue (Fig. 166) which is constructed in three planes, head, torso and legs, achieving thereby a formal stability which the Renaissance sculptor deliberately avoided. The generalizations of Michelangelo's figure make it seem almost classic when compared with Donatello's romantic conception of the shepherd lad or with the realistic one by Verrocchio. At the same time, its concreteness is such that this David seems capable of performing the deeds attributed to the Biblical hero which cannot be said for the 15th century examples. For Michelangelo did not attempt to produce either a symphony of classic grace or a specific portrayal of an individual youth. His aim was to create a form that would typify the awkwardness of adolescence; the beauty of the statue lies in the completeness of his interpretation of that idea.

At about the same time that he was working on the David, Michelangelo carved a statue of the *Virgin and Child* (Fig. 214) which is in the church of Notre-Dame at Bruges in Flanders. His conception of the subject differs in several important characteristics from the 15th century type employed by Desiderio (Fig. 208), particularly the treatment as a free-standing group. Different too is the relationship of the two figures to each other. In Desiderio's relief, the Child is seated on his mother's lap, while

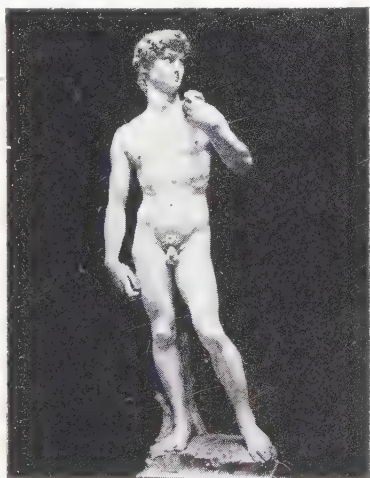


FIG. 213.—MICHELANGELO. DAVID, ACCADEMIA, FLORENCE.

in Michelangelo's group, he stands between her knees, his figure outlined against the shadows of the drapery folds. The tender playfulness that is such a human touch in the 15th century relief gives way to an air of grave solemnity. The Virgin's face is turned away from the Child whose mien is as thoughtful as her own. The impersonal dignity of the expressions is given authority



FIG. 214.—MICHELANGELO. MADONNA AND CHILD.
NOTRE DAME. BRUGES.

by the treatment of the bodies. In the twisting of the torso, the *contrapposto* which becomes an effective instrument of emotional expression in Michelangelo's later works makes its appearance. The body is perfectly expressed by the draperies which are arranged to emphasize the important structural facts of the anatomy, for example the heavy folds at the juncture of arm and shoulder. The whole group is marvellously compact in mass whereby it attains unity in spite of the variety of movement in the figures

themselves. Made between 1501 and 1505 it reveals a trace of the sculptor's 15th century background in the detailed treatment of the drapery. At the same time, the subordination of the accessories to the body forecasts Michelangelo's later manner in which the human figure alone serves as the vehicle of expression. Another detail that also appears in later works is the ideal sexless mask of the face which is deliberately subordinated as an expressive factor.

Michelangelo's later style begins with the tomb which Julius II commissioned from him in 1513. It was to provide a suitable setting for this tomb that the Old Basilica of St. Peter in Rome was destroyed to be replaced by the half-Renaissance, half-baroque structure which now bears the name. Much of the bitterness that clouded the sculptor's last years can be traced to the obstructions that constantly militated against the completion of this project. The tomb now stands in the church of S. Pietro in Vincoli in Rome, a sorry compromise between Michelangelo's ambition and the niggardliness of Julius' heirs which gives but a meagre impression of the original conception. Only the colossal Moses on the tomb itself is by Michelangelo but a number of figures in existence elsewhere are known to have been planned for it. Two of these are the so-called *Bound Slaves* in the Louvre in Paris, one of which is illustrated (Fig. 215). It was probably intended as a symbol of one of the Liberal Arts, freed by the munificence of Julius but fettered once more after his death. Whatever the symbolic meaning, its larger significance is as the concrete embodiment of an idea of tremendous power, an idea which is conveyed objectively by the great muscles and the body twisted in the *contrapposto* noted before in the Christ Child in the Bruges group. To this extent, the sculptor works in the same manner as in the David, but he goes farther here than in the earlier work and gives an abstract meaning to the physical power of the figure by representing it as restricted by the bands around the chest, against which it has struggled in vain. The motive thus given for the exhaustion of the figure appears at first glance to be insufficient, just as the snakes in the Laocoön group (Fig. 176) do not seem to provide an adequate motive for the agony of the dying father and his sons. But by representing, not the moment when the figure is exerting its strength to the utmost but the collapse of the body after its energy is spent, the whole concept



FIG. 215.—MICHELANGELO. BOUND SLAVE. LOUVRE, PARIS.

is lifted from the physical into the abstract. The sense of tragedy comes from the futility of the magnificent physique in the face of a power that is the greater because it is not seen but felt.

In the *Bound Slave*, Michelangelo approaches his ideal of the plastic expression of ideas solely by means of the human form. The development toward this goal in his style can be observed by comparing the *Madonna of Bruges* (Fig. 214) with the



FIG. 216.—MICHELANGELO. MADONNA AND CHILD. MEDICI CHAPEL, S. LORENZO, FLORENCE.

Virgin and Child in the Medici Chapel in S. Lorenzo in Florence (Fig. 216), which was probably executed between 1525 and 1533. The comparatively simple movement of the figures in the earlier group has become more complex. Notice, for example, the torsion created in the upper body of the Virgin by forcing the right shoulder back while the head is turned to the left. The legs are crossed giving greater variety of movement to that part of the body than in the *Bruges* group where Michelangelo was satisfied by raising the left foot higher than the right one. The compact-

ness of the earlier composition is retained, however, by placing the Child astride his Mother's knee, the body twisted around in a movement motivated by searching for the breast. The face of the Virgin is almost masculine and has definitely become a subordinate element in Michelangelo's expressive vocabulary, a fact which is explained by his growing intolerance of details that might detract from the major importance of the concept as a whole. The same thing is true of the manner in which the drapery is



FIG. 217.—MICHELANGELO. TOMB OF LORENZO, DUKE OF URBINO. MEDICI CHAPEL, S. LORENZO, FLORENCE.

treated. Where in the earlier group it was represented in some detail and with a suggestion of its intrinsic texture, it has now become a neutral substance that is of value only as it makes clear the articulation of the powerful body underneath. Thus although there is hardly any contrast between the surface of the left foot and the drapery covering the leg, the three folds radiating from a point immediately underneath the knee are emphasized to make clear the movement of the joint, thus accenting a detail that must be understood if the organic unity of entire arrangement is to be grasped.

The *Medici Tombs* in the New Sacristy of S. Lorenzo in Florence (Fig. 84) represent the climax of Michelangelo's style. He designed both the architecture and sculpture and although the chapel was never entirely completed, there is a consistency of effect throughout which forecasts the artistic synthesis that was to take place in the baroque period. The sacristy was planned originally as a commemorative mausoleum for the Medici family and would have contained four tombs, two single ones for Giuliano de' Medici and Lorenzo, the Duke of Urbino, and a double one for Lorenzo the Magnificent and his brother Giuliano. Only the two single tombs were completed, the designs being similar. A

seated statue of the deceased occupies an architectural niche above the sarcophagus on which are two recumbent nude figures, one male and one female. These represent Night and Day on Giuliano's tomb (Fig. 84), while those on Lorenzo's sarcophagus are Morning and Evening (Fig. 217). There is no pretense made to portraiture in the statues of the deceased, for in each one the face is represented by the same sexless mask that appears in the Madonna and Child in the same chapel (Fig. 216). Only in the

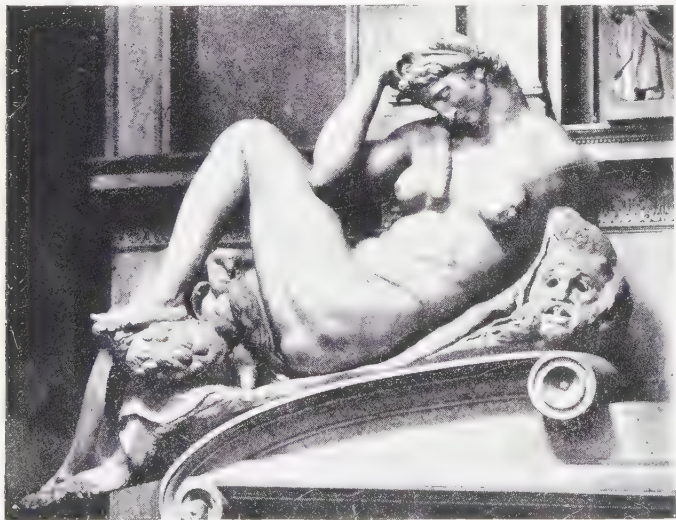


FIG. 218.—MICHELANGELO, NIGHT, TOMB OF GIULIANO, MEDICI CHAPEL, S. LORENZO, FLORENCE.

postures is there any differentiation, Giuliano as the alert symbol of an active life balanced against the contemplative Lorenzo. The shadow over the face of the latter heightens the impression of an abstract and impersonal entity, a device which anticipates baroque methods.

In the nude figures on the sarcophagi, Michelangelo attained his ideal of the human form as the sole means of giving expression to abstract ideas. Drapery is omitted as an impediment to the fullest realization of this ideal. Even the faces are relatively unimportant as isolated factors, drowned in shadow in the *Night* (Fig. 218) and left unfinished in the figure of *Day* (Fig. 84).

In the bodies, stylistic characteristics that have been noted in Michelangelo's earlier figures are emphasized. In the Night (Fig. 218), a powerful *contrapposto* is created by forcing back the left leg against the forward twist of the right arm and shoulder, resulting in violently contrasted movement within the body itself. The pose is one that seems impossible of human attainment, yet Michelangelo renders it plausible by investing the figure with all the concreteness that Renaissance naturalism made possible. Another contrast exists between the delicate profile of the face and the masculine proportions of the heavy torso with its hanging breasts and wrinkled abdomen. These objective contrasts are paralleled by that between the superhuman physical strength of the figure and the deadly weariness that has overpowered it. The discordant impression created by these qualities is heightened by the perilous position of the statue on the sarcophagus and becomes thereby an element in the greater dissonance that exists in the whole design as a result of the conflict between the sculpture and its architectural setting.

In the spectator viewing these powerful bodies that are wracked by forces of superhuman power, there arises an indescribably tragic emotion. He experiences in their presence the same sense of human futility that invests the Bound Slave with such pathetic meaning. It is achieved more subtly than in the earlier work, by the languor and weariness of the figures instead of the bonds, and is consequently more powerful in effect. Michelangelo has thus evolved a method of expression exactly the same as that employed by the fifth century Greek sculptor, namely a formal arrangement of the human body, yet nothing could be less classic in effect than these tremendous figures. The difference between the beauty of the Mount Olympus of the Parthenon (Fig. 157) and that of Day on the tomb of Giuliano de' Medici (Fig. 84) is explained by the different ideals embodied in them, intellectual and impersonal in the Greek figure, individual and emotional in that of the Renaissance. In these figures, Michelangelo gave concrete form to the disillusionment and sense of frustration in his own soul. A sincere Christian, he lived in an age notable for its disbelief. A champion of municipal and national political freedom, he saw his beloved Florence crushed under the heel of anarchy and Italy enslaved by foreign powers. A consummate artist, he was prevented from completing every one of the projects that had been

the nearest to his heart. In the light of these facts, it is no wonder that below the personifications of the Active and Contemplative Lives over the sarcophagi of the Medici scions, he placed those gigantic beings whose superhuman power is overcome by lassitude and exhaustion, a withering commentary upon the futility of all human endeavor before the forces of ignorance and evil. The superlative thing about them is the transmutation of these personal feelings by the alchemy of genius into universal symbols that provide the human soul with an investiture of beauty for its pain in all ages to come.

CHAPTER XXII

EUROPEAN SCULPTURE FROM 1550 TO 1800

THE influence of Michelangelo's style upon sculpture was very great and not invariably beneficial. So authoritative were the gigantic forms that gave expression to his ideas that, by comparison, the work of his predecessors and the majority of his contemporaries who still employed 15th century methods seemed pallid and feeble. His figures were thus instrumental in creating a taste for the extraordinary and the striking which appears in the work of many of his successors, who employed forms similar to his but inevitably without their profound meaning. In this respect, Michelangelo stands in much the same relationship to sculpture of the late 16th century as Donatello to that of the 15th; the technical problems that he posed were observed but the content that gave his figures beauty was not perceived. This is apparent in the three main tendencies in Italian sculpture after 1550. The first was to reproduce the colossal size of Michelangelo's figures, trusting to their physical bulk to achieve a monumental effect. The second was to utilize his forms for decorative purposes. The third is seen in attempts to transform the effect of suppressed power implicit in his figures into explicit movement.

Of the first of these three tendencies, there is no necessity to speak in detail. The technical excellence which sometimes is evident in the work of the exponents of the colossal is never sufficient to offset the magnificent ineptitude of their ideas. The best known, if not the best exemplar of the second tendency is Benvenuto Cellini (1500-1571). His intriguing personality lives again in the lines of his *Autobiography* whose rapid prose invests his sculpture with an interest greater than that intrinsic in it. The fascinating account of casting the bronze *Perseus with Medusa's Head* (Fig. 219) in the Loggia dei Lanzi before the Palazzo Vecchio in Florence (Fig. 66) has much greater vitality than the figure itself. The statue is an excellent example of the art of bronze casting. It is in two separate parts, one being the body of

Medusa and the other the hero holding her severed head. The drama of the subject is entirely lost in the ostentation of the Michelangelesque form which combines emphasis on muscular structure with an over-minute rendering of detail that reveals Cellini's training as a goldsmith. In the contrasted horizontal and vertical accents of the two bodies, there was a possibility of diffusing the interest of the group, a danger which the sculptor sought to avoid by the somewhat ludicrous device of having Medusa's leg pulled around the base by her left arm. The same subordination of dramatic considerations to decorative ones is evident in the treatment of the blood spurting from the severed neck and head. The irrepressible egotism of the sculptor that is evident in every line of his *Autobiography* led him to inscribe his name in a prominent position on the diagonal strap across Perseus' shoulder and also to introduce a mask with his own features on top of the helmet where its invisibility protected him from the jeers with which his contemporaries would certainly have greeted it.

The third tendency in Italian sculpture of the late 16th century is seen in the work of Giovanni da Bologna (c.1524-1608) who attempted to give his figures something of the power latent in Michelangelo's by highly animated poses. The three bodies in the *Rape of the Sabine Woman* (Fig. 220), which was executed in 1583, resemble those created by the great Florentine in the *contrapposto*. But it is a decorative device rather than a means of emotional expression, the twist of one figure being balanced against that of the others to achieve an effect of spiral upward movement by the contours. The same static movement appears in his best

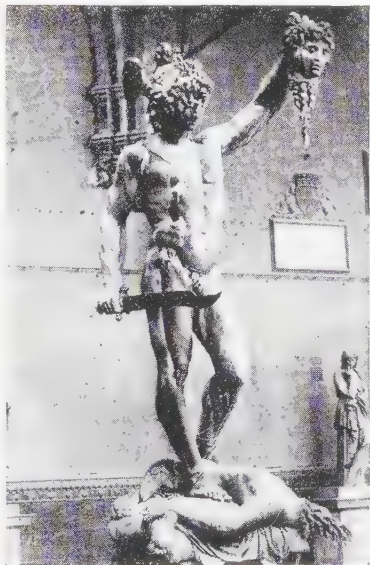


FIG. 219.—CELLINI. PERSEUS AND MEDUSA. LOGGIA DEI LANZI, FLORENCE.

known work, the bronze Flying Mercury. The effectiveness from all points of view thus attained anticipates the formal conceptions of 17th century baroque art.

It has been pointed out in discussing late 16th century architecture in Italy that the taste of the time shows a decided tendency toward academic conceits. This is no less true in sculpture. In the Rape of the Sabine Woman, for example, the faces of the three

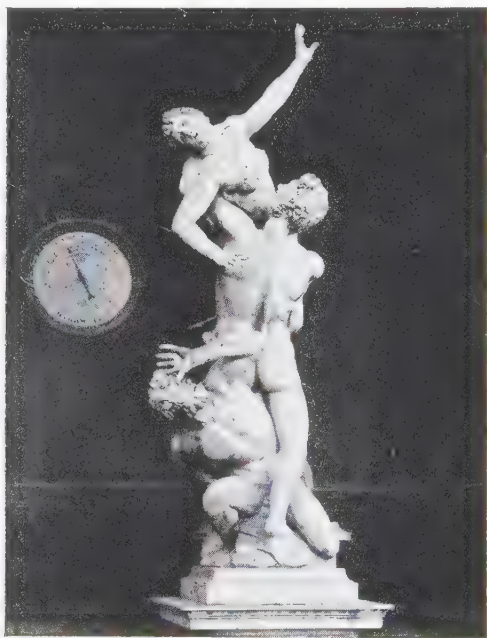


FIG. 220.—GIOVANNI DA BOLOGNA. RAPE OF THE SABINE WOMAN. LOGGIA DEI LANZI, FLORENCE.

figures are ideal, generalized types in the classic manner. The old man is clearly related to Laocoön (Fig. 176) both in expression and the gesture of the hand, and the body of the woman, for all its naturalism, was evidently modelled on that of the youth to the left in the same group. It should be noted, in passing that the Hellenistic statue was discovered in 1505 and its immediate popularity was doubtless considerably increased by the taste for

violent movement created by Michelangelo's works, so it is not surprising that it should have exerted a notable influence upon the late 16th century sculptors who were attempting similar effects. No less academic than the style was the problem that Giovanni set for himself in executing the group, to portray and contrast in a single statue three different nudes, the feminine, the youthful masculine and the aged masculine. He was interested only in the technicalities of the problem but the humanist critics of the time promptly christened it with a classic title by which it has been known ever since. Under such circumstances, it could hardly be expected to have any profound meaning nor does it have. It is highly decorative, however, a fact which explains its great influence on later sculpture, not only in Italy but elsewhere in Europe.

Outside of Italy, the most important sculpture produced in Europe during the last half of the 16th century originated in France. As in architecture, the first Renaissance sculpture in France reveals more or less superficial Italianisms, evident chiefly in attempts to modify the concrete and realistic native style toward a more consciously esthetic and decorative ideal. The Italian sculptural modes made their entrance into France in the same way as the architectural ones; both were introduced by the rulers whose military invasions of the southern peninsula had opened their eyes to the novel beauty of its art. As a result of the interest thus aroused, Italian artists were encouraged to come to France, among the sculptors being Benvenuto Cellini whose accounts of his experiences in the French court constitute some of the most entertaining pages of his *Autobiography*. The decoration of the palace begun at Fontainebleau in 1528 by Francis I was almost entirely by these Italians, and their *atelier* at Fontainebleau soon became a school to which many French artists went for training. It was the source of an enthusiasm for classic ideas that led, among other things, to the importation from Rome of a number of bronze replicas of antique statues that had been discovered there. The ingredients of the late 16th century style of French sculpture were thus threefold, the native, realistic medieval tradition, the classic, and the interpretation of the latter that appears in Italian High Renaissance art.

In the development that took place in French 16th century sculpture, the classic and Italian manners soon became preeminent, thanks to the fashionable prestige lent them by aristocratic

patronage. There is an important difference, however, between French 16th century classicism and that of Italy in the 15th. The latter country turned naturally to the antique when the yoke of Gothic dominance was thrown off, for it was a rightful inheritance from the past. In France, on the other hand, the classic mode was no more than an imitation, based on an absolute ideal of *a priori* perfection. In consequence of this, it was incapable of such development as that which characterized Italian 15th century art or French Gothic, both of which originated in an unconsciously felt need for expression and which changed in form with the ideals of the civilizations that produced them. In contrast to this, the French classic ideal of the 16th century was not realized intuitively but by a purely intellectual process; once attained, there was no possibility of further development. The larger significance of this contrast is that it meant depriving art of the vitality derived from connection with contemporary thought by making it entirely a matter of theory. Evidence of this latter is seen in the appearance during the 16th and 17th centuries of many theories of art and in the establishment in the 18th of the science of esthetics. From them, it is only a step to the modern idea of art as a thing apart from life, capable of theoretical exposition, intelligible only to the favored few and similarly restricted as a medium of expression. The authority attained later by this conception of art was a result of the thoroughly logical, and therefore typically French synthesis achieved in the style developed by the end of the 17th century which bore the stamp of formal approval by the Academies. It was thenceforward accepted as the basis of artistic judgment throughout the western world.

Attempts by French sculptors to work on preconceived principles derived from classic art can be found as early as 1549. In that year, Jean Goujon (d. before 1568) produced his masterpiece, the *Water Nymphs* (Fig. 221) on the Fountain of the Innocents in Paris. The manner in which the bodies appear underneath the draperies suggests comparison with the late fifth century Nike Balustrade (Fig. 165). The technique is very similar in both, the upper surfaces of the drapery folds being kept quite narrow and the lower planes broadened. In the French example, the clinging effect is motivated by the action of the nymphs who pour water from the jars they hold. It should not be inferred from this comparison that Goujon was actually inspired by the Nike

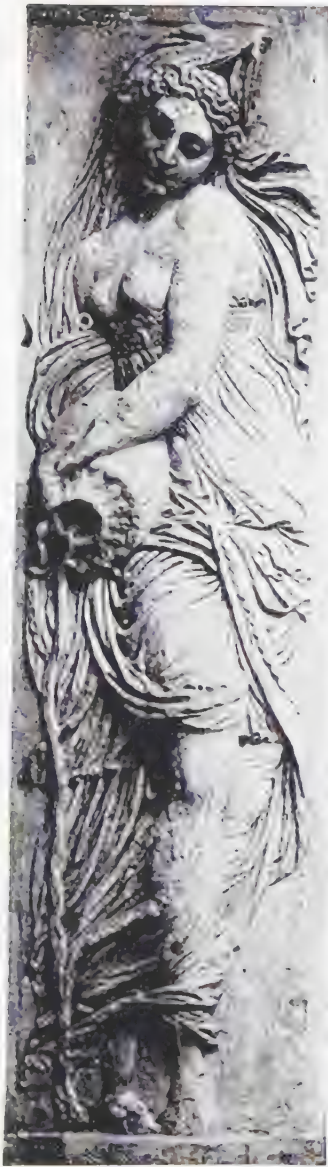


FIG. 221.—GOUJON. NYMPHS ON THE FOUNTAIN OF THE INNOCENTS.
PARIS.

Balustrade reliefs but only that he was undoubtedly influenced by classic methods. With these he was well acquainted by virtue of the fact that he executed the drawings for the first French edition of Vitruvius. His style is saved from dryness by his lively sense of beauty and feeling for graceful design. That the medieval tradition was not completely dead is indicated by the fact that Goujon attained his most effective results in sculpture that was architectonic as in the Nymphs on the Fountain of Innocents and



FIG. 222.—PILON. RENÉ BIRAGUE. LOUVRE, PARIS.

the reliefs on the early 16th century portion of the Louvre (Fig. 90). Medieval too is the sense of concreteness that results in the differentiation of the faces in the Nymph reliefs and the modish coiffures, a persistence of late Gothic realism. Here it is combined with the alien Italian decorative ideal to produce a somewhat artificial type that is characterized as "aristocratic genre" for lack of a better term. To this same concreteness, which is never wholly absent from French art, is due the remarkable realism of the beautiful sinuous bodies revealed by the clinging draperies.

Even more striking than the realism of Goujon's Nymphs is that of the bronze portrait statue of *René Birague* (Fig. 222) made

in 1584 as an adjunct to his tomb by Germain Pilon (1535-90). So powerful is the characterization of this head that all the numerous and insistent details of the naturalistically portrayed draperies and other accessories cannot draw attention away from it. This intrinsic realism was originally made even stronger by painting the figure. But even Pilon, confirmed realist that he was, succumbed to a force which made itself apparent in the Catholic European countries during the last years of the 16th century, the reaction against the Protestant Reformation in the north. Evidences of this reaction are to be found in all phases of 16th century life, the Jesuit Movement and the bloody Massacre of St. Bartholomew's Day at Paris in 1572 to mention only two. In Pilon's sculpture it is apparent in the emotion that practically overwhelms the content of his figures as in the case of a statue of St. Francis of Assisi which had to be removed from the Louvre and placed in a church because the great number of votary gifts heaped about it in the museum was a source of some inconvenience to the officials. But Pilon's figures are only minor examples of the emotional art in which the Catholic Reaction is made manifest. This is the Baroque, and its greatest exponent was the Italian, Bernini.

It has been pointed out before that the outstanding characteristic of baroque art is its striving for intensely emotional effects. In sculpture, this was achieved by investing the animated but cold forms of the late 16th century (Fig. 220) with a new content that involved a definite modification of the style. Just how this was brought about can be seen in the statue of *Santa Theresa in Ecstasy* (Fig. 223) executed by Gian Lorenzo Bernini (1598-1680) in 1646. The subject is a typical product of the emotional fervor that characterized the Counter-Reformation. The statue represents a dream, described by the saint in her writings, in which an angel appeared before her holding a dart, symbolic of divine love, with which he pierced her heart. The static movement of Giovanni da Bologna's group has become dynamic in Bernini's, an effect achieved by avoiding the closed contours that limit the action in the earlier work and employing broken, indeterminate ones. By this means, the movement generated in the animated draperies is not restrained by a firm silhouette but seems to extend beyond the figure itself, an effect which is heightened by such devices as the hanging foot and the inclination of the saint's head.

The result is an impression of space around the group with which it is actually related. Such a sculptural concept is of a piece with that of 17th century architecture, and the devices by which it is realized are typically baroque. The closed contours that emphasize the bulk and weight of 16th century figures (Figs. 218, 220) are abandoned. The definiteness of the High Renaissance gives way to



FIG. 223.—BERNINI. SANTA THERESA IN ECSTASY. S. MARIA DELLA VITTORIA, ROME.

indefiniteness in the Baroque, the method of portraying the figures becomes suggestive rather than representative and is correspondingly more fluent as a medium of expression. Light and shade also play an important part. Michelangelo employed effects of *chiaroscuro* to affirm the static plastic values of his figures while Bernini uses them to emphasize the movement of surface and contour, and by creating a specific light source for the group, he makes its relationship to space more positive.

In all of these characteristics, the baroque quality of Bernini's style is apparent. The term baroque is usually applied to any art in which an arbitrary handling of material to produce striking effects causes it to pass beyond its proper limits into those of another art whose medium lends itself to more fluent expression. Thus the fluid surfaces employed in baroque architecture produce effects that are intrinsically sculptural. The term might easily be applied to the Laocoön group or the Souillac Prophet, so definitely do both transcend their mediums to attain emotional effects. It might even be used to describe Ghiberti's Old Testament panels, so closely do they approximate the effect of painting. But the meaning of the term can be most fully realized in Bernini's sculpture. In the sense of space around the figures and of which they are a part, in the play of light and shade created by a light source within the composition and existing as an end in itself, Bernini has employed visual effects appropriate to painting at the expense of primarily sculptural values of weight and volume. That this was his aim he admitted himself in stating that he was trying to "paint in marble." But more fundamental than this is the idea underlying all art of the Baroque period, to astonish the observer and so arouse in him a positive emotional reaction. It is for this reason, rather than to demonstrate the skill of the artist, that tons of marble seem to float in the air in the Santa Theresa group, the very form of the material denying its essential weight.

The group of Santa Theresa is characteristic of the art inspired by the Counter-Reformation in its attempt to express spiritual emotion in terms of fleshly experience. The rapture in the saint's soul takes form in physical transports that come dangerously near the sensual, as, in fact, it was described in her own writings. In this respect, the statue makes objective the whole purpose of the Counter-Reformation in which the Church sought to re-establish its power by addressing itself to the emotions of its constituents through the medium of ideas that could be interpreted entirely in terms of human experience. In the Middle Ages, this had been done by appealing to the spirit through the intellect, but that was no longer possible for the 17th century was separated from the 13th by the Renaissance. Man had been awakened once more to the reality of physical experience, a reality which

he was never to forget. As a result, the message of the Church had to be cast in a different form, which it attained abstractly in the doctrines of the Jesuit movement and concretely in baroque art.

The pervasive movement that contributes so materially to the emotional expressiveness of the Santa Theresa is a characteristic baroque feature. In Bernini's portraits, such as that of his mistress *Costanza Buonarelli* (Fig. 224), it is utilized to create an impression of mobile expressiveness that is highly realistic. The same irregularity of contour is seen here that appears in the religious group and is a vital factor in the different impression derived from baroque portraits than is felt in the presence of a 15th century one (Fig. 209) with its closed silhouette. Again as in the religious work, the restlessness that results from the broken contour ap-



FIG. 224.—BERNINI. COSTANZA BUONARELLI. BARGELLO, FLORENCE.

pears in the details as well, in the flowing lines of the tossed hair and the play of light and shade on the crumpled folds of the garment. To this is added the momentary quality of the pose, the open bodice partially revealing the breast, the slight turn of the head, the flicker of light in the eye produced by drilling a hole for the pupil and the partly opened mouth. The vivacity which all these details give to the portrait is undeniable, but it also renders impossible the recording of the telling details of personality which are essential to great portraiture.

The sense of movement that contributes so effectively to the emotional effect of baroque religious sculpture and the naturalism of its portraiture is employed to achieve most ingratiating results in works of a decorative nature, such as the fountains with which many of the vast piazzas or open squares in Rome were ornamented in the 17th century. In them, the actual movement of water over the fluid surfaces of the figures considerably heightens their animation. One of them may be seen before the Pantheon (Fig.

23), made up of writhing tritons spurring water from their mouths and grouped around a base surmounted by an Egyptian obelisk of which a great number were brought to Rome in the Roman period. An obelisk is also the crowning motive of the *Fountain of the Four Rivers* (Fig. 225) in the Piazza Navona in Rome which Bernini executed in 1647. The four figures represent the Rhine, Ganges, Nile and de la Plata Rivers which in turn are allegorical symbols of the four parts of the world, all of which acknowledge



FIG. 225.—BERNINI. FOUNTAIN OF THE FOUR RIVERS. PIAZZA NAVONA, ROME.

their allegiance to the spiritual rule of the Church which is symbolized by the papal tiara and keys. The symbolism is not over-prominent however, as the sculptor's chief aim was to produce a decorative ensemble which should be unified by the flow of water over the irregular natural rock forms. The fountain was used as a decorative motif by baroque architects in other capacities than urban ornament, a particularly effective one being in the

extensive gardens that formed an essential part of the great country estates such as the Villa d'Este at Tivoli (Fig. 87).

The baroque movement is hardly apparent in French sculpture. It is seen indirectly in Germain Pilon's work, as has been mentioned, in the powerful emotion that is a result of genuine religious conviction. It also appears in the exaggerated gestures of the groups in which Pierre Puget (1622-94) tried vainly to reconcile his own stormy nature to the classic taste of 17th century France. Neither of these manifestations of the Baroque are of more than passing importance, however, and are clear indications of its failure to obtain a foothold in French art. This fact can be explained by the inability of the Church to acquire control of the French State, unified as it was under the absolute rule of Louis XIV. Baroque art, as has been seen, was primarily the instrument of the Counter-Reformation which had brought about a condition of religious absolutism in the Church under the Pope which was comparable to the political one established by the French monarch. But since the royal style in France was essentially classic, no encouragement was given the Baroque with its emphasis upon certain qualities that were foreign to a classic point of view. A similar phenomenon has been observed in French architecture which eschewed the Baroque with its susceptibility to exaggeration in favor of a more restrained and classic style.

The foundation of the French Academy of Sculpture in 1648 and of the Academy at Rome in 1677 served to confirm the classic mode of thought initiated by the school of Fontainebleau. More than this, it extended to the field of art the principle of absolutism that had already been established politically in the methods of government practiced by Louis XIV. The ideal which this absolutism imposed on French artists is stated concisely in a letter from Colbert, Louis XIV's Minister, to the director of the French Academy at Rome, "Take good care that the sculptors copy purely the antique, but without adding anything"; and again, "See that there is no change from the originals, *i.e.* that the copies which you have them make are of the same measurements." With such restrictions as these in force, it is no cause for wonder that there is not a single French sculptor of first rank from the time of Louis XIV's accession to the throne until the close of the 18th century. That the same is not as true of 17th century paint-

ers and architects is only due to the absence of classic models for the first and the persistence of an indigenous architectonic tradition in the second.

Just as French classic sculpture was born and spent its childhood in the decoration of Fontainebleau, so its early maturity was reached in the ornament of the palace and gardens at Versailles (Fig. 93). A relief of *Bathing Nymphs* (Fig. 226) from the Fountain of Diana by François Girardon (1628-1715) is an example of its style. Girardon had travelled in Italy but he had not been influenced so much by the baroque evocations of Bernini's genius as by Giovanni da Bologna's more academic concepts. The latter influence is apparent in the more plastic quality of Girardon's



FIG. 226.—GIRARDON, BATHING NYMPHS. BAIN DE DIANE, VERSAILLES.

Nymphs in comparison with Bernini's unsubstantial marble visions (Fig. 223). But their robustness is derived from the baroque canon rather than the more slender and muscular type employed by Giovanni (Fig. 220), and is suggestive of the fleshy ideal which Rubens had done much to popularize in the northern countries (Fig. 309). Other features of French 17th century sculpture that appear in the relief are the elegance which never completely deserts the French artist, and the concreteness apparent in the careful delineation of the reeds as well as the somewhat disquieting personal note in the Nymphs themselves which makes them appear, for all the classic generalization of the faces, like a group of buxom French *demoiselles* in an unsuspecting moment of idle sport. The relief is an excellent example of all that is meant by the Louis

XIV style for even in the supposedly abandoned movement of the figures, there is a correctness which becomes stiff pomposity in more formal subjects. This correctness is an element of the norm of perfection to which the academic sculptors were forced to conform, a fact which made all of their work good and none of it interesting. In the dull vistas of the Louvre sculpture galleries, it sometimes seems that it would be a pleasure to see an incorrectly drawn figure for the note of vitality it might sound in the soporific symphony of all-prevailing exactitude. Only in occasional portraits does the native French sense of the concrete thrust through



(Courtesy the Metropolitan Museum)

FIG. 227.—CLODION. NYMPH AND SATYR. METROPOLITAN MUSEUM, N. Y.

the meaningless conventions forced upon the creative genius of the country by the Academy.

In the 18th century, there is a reaction in France against the formality and correctness that prevailed in the 17th. At first, this appears as a relaxation of the stately decorum maintained in society of the Louis XIV period, a relaxation that degenerated into licentiousness in the last part of the century during the reign of Louis XVI. In art, the change is more apparent in architecture and painting than in sculpture. The formal halls of Versailles give way to the intimate boudoirs of the Petit Trianon, ornamented with light

and graceful forms that represent an application of baroque principles of design to surfaces rather than outlines, producing the style known as "rococo." The movement and variety that characterizes rococo architecture also appears in the painting of Watteau, only to lapse into calculated voluptuousness in Boucher and Fragonard.

It is usual to decry the 18th century in France as a period of unbounded licentiousness and to condemn it as decadent. That the latter criticism at least is not unqualifiedly merited is evident in the vitality manifest in such a group as the *Nymph and Satyr* (Fig. 227) by Claude Michel who is usually known as Clodion

(1738-1814). Here we see the old French sense of the actual welling up once more, to invest the classic 17th century formulas with new life. That Clodion's conceptions were no more lofty is the fault of his time rather than his temperament. The greater part of his work consists of small statuettes such as the Nymph and Satyr, designed primarily for interior ornament and as appropriate to the boudoir as the heroic 17th century figures were to the formal gardens in which they were placed. The brisk if artificial gaiety of the Regency is well suggested in the animation of Clodion's figures, not only by the poses but also by the highly naturalistic modelling. His facility in this mode was due in part at least to his use of terra-cotta as a medium for it lent itself quite readily to the flowing surfaces of the rounded limbs, mobile lips and expressive nostrils that embodied his sensual ideal.

In many ways, Jean Antoine Houdon (1741-1828) is the most interesting of the French 18th century sculptors. Judged by his work, he appears to have been particularly sensitive to the intellectual currents of his time although his assimilation of their ideas must have been intuitive rather than conscious. The Bathing Nymph in the Altman Collection at the Metropolitan Museum in New York is rococo in technique but the sentiment is that of Rousseau's cult of Nature. In other works, he follows the generally classic trend of contemporary academic taste but always modified by concrete and objective realism. It was this characteristic of his style that finally brought him to the sphere of activity in which he achieved his greatest success, that of portraiture. He executed busts of the most prominent personalities of the day, among them *Voltaire* (Fig. 228), the example illustrated being one of many that he made of the illustrious dramatist and poet. The technique is still rococo in the curling line of the hair and in such details as the deliberately roughened edge of the hole representing the pupil of the eye to give it a glint. Houdon's naturalism is apparent in the scrupulous exactness with which the features are represented, but the bust is more than a translation of the model into marble. By emphasizing the essential traits and subordinating the irrelevant ones, the sculptor has made his work not only a record of individual appearance but the embodiment of a type. The glint in the eye, for example, is the sparkle of half-cynical, half-benevolent amusement, the same spirit that we feel in reading Voltaire's poems and plays. By such means, Houdon not

only tells how Voltaire looked but also the way in which his personality affected those who came in contact with him and has thus created a telling and powerful portrait.

For Americans, more than usual interest is attached to Houdon by virtue of his association with the United States during the



FIG. 228.—HOUDON. VOLTAIRE. LOUVRE. PARIS.

years immediately following the Revolution. He crossed the Atlantic to make a portrait statue of Washington, now in the Capitol at Richmond, Va., which is somewhat less flattering to the subject than many of his painted portraits. While in the United States he also executed busts of some of the most prominent citizens of the Republic, notably Franklin, Jefferson, John Paul Jones and Robert Fulton. Probably his best known work is the full length seated portrait of Voltaire in the Comédie Française at Paris in

which neo-classic draperies contrast most strangely with the characteristically realistic head. Apart from their intrinsic value as works of art, Houdon's sculptures are of great interest by virtue of their reflection of the changing thought during the late 18th and early 19th centuries. It is this quality of his work that makes it more or less independent of any school or movement and which invests it with a peculiarly timeless character.

CHAPTER XXIII

SCULPTURE SINCE 1800

THE Neo-classic Movement in art with which the 19th century opened was the first and intellectual phase of the revolt against the old absolutism, a revolt which had already taken place politically and socially in the American and French Revolutions. The academic and rococo styles of the old régime had been swept away with its political and religious paraphernalia, to be replaced by the Neo-classic. The intellectual and social background of the Neo-classic Movement has been discussed elsewhere. Suffice it to say here that the conscious attempts to recreate the artistic forms of classic antiquity which gave birth to the movement are more apparent in sculpture than in either painting or architecture for a reason that is more or less self-evident. The antique mode in painting could not be recovered as no monumental examples of it existed. Similarly the practical nature of architecture placed an obstruction in the way of unvarying reproductions of classic buildings to be put to modern uses. Neither of these considerations applied to sculpture for it had no preeminently practical purpose and examples of classic figures existed in great numbers.

The Neo-classic Movement was partly a result of popular enthusiasm for antique art that existed in the 18th century which had been aroused by the discoveries at Pompeii and Herculaneum. It is this enthusiasm which underlies the writings of the German scholar Winckelmann who has been termed the father of modern archæology. The theory developed in his writings is that the purpose of all good art is the attainment of "pure beauty," *i.e.* beauty of form without consideration of its content. This "pure beauty," according to Winckelmann, had been realized only by the Greeks and by those moderns who approached Nature as he imagined the Greeks had done, striving only for effects of "noble simplicity" and "quiet grandeur." These terms reveal the moral turn in his propaganda for art, a moral turn which was undoubtedly a reaction against the sensual mode of the time, for Winckelmann believed that his gospel of the beautiful was to regenerate

Europe spiritually as well as artistically. His ideal of beauty was based on classic sculpture in which he recognized the beauty of line and contour but failed entirely to observe the important function of modelling. It seems strange today that the most popular dissemination of Winckelmann's theories, through the writing of his pupil Lessing, should have centered around a discussion of the Laocoön group which is the very antithesis of his ideal in content as well as technique.

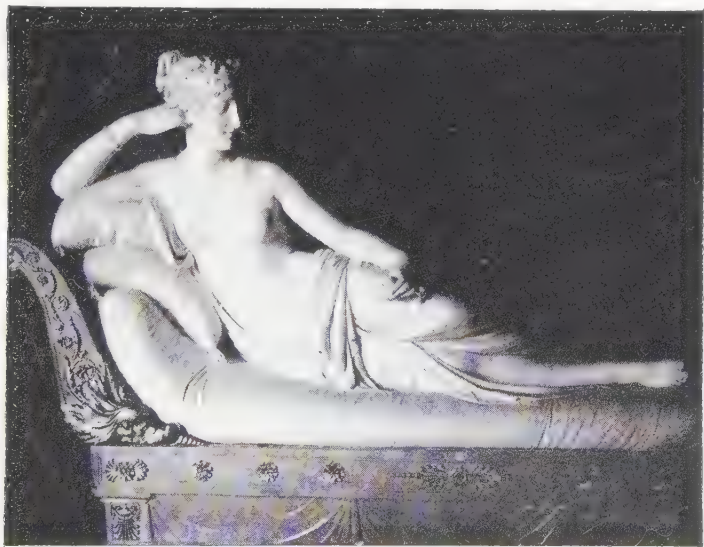


FIG. 229.—CANOVA. PAULINE BORGHESE. VILLA BORGHESE. ROME.

The extent to which Winckelmann's esthetic pervaded early 19th century sculpture can be seen in the work of the Italian Antonio Canova (1757-1822). His best known piece, the group of Cupid and Psyche, reveals a scrupulous observance of the Winckelmann formula in its formal beauty and total lack of content. His portraits can be similarly characterized such as that of *Pauline Borghese* (Fig. 229), the sister of Napoleon, in which a compromise was made between the generalization that was considered the primary characteristic of classicism and the realism essential to a portrait. This compromise was achieved by placing the stamp of individuality upon the face alone, the body being

treated according to classic models. As a result, the features of the Corsican princess look out from the half-nude body of a Roman goddess, the lower part of the figure having been modelled after a Venus type in Roman art. Even the effort to generalize the torso could not conceal the sculptor's contemporaneity with the rococo which is revealed by the rippling surfaces of the flesh. The drapery, on the other hand is handled in a strictly linear fashion and the hard contour lines throughout are typical of the neo-classic style.

The popularity of the neo-classic ideal is attested by its wide geographical diffusion. The Danish sculptor Thorwaldsen (1770-1844) was probably a better exponent of Winckelmann's theories than Canova for he was less affected by the rococo than his Italian contemporary. As a result, his figures are even more frigid in effect. That he had no real understanding of classic sculpture is apparent from the fact that after Thorwaldsen had restored the sculptures from Aegina, his own style showed no effects of his knowledge of the Greek work. The neo-classic style also obtained a strong foothold in England, for its linear quality appealed strongly to a feeling that is apparent in the art of that country from medieval times. Its outstanding English protagonist was John Flaxman (1755-1826) of whom no more need be said than that he considered the acquisition by the British Museum of the Parthenon sculptures to be of "doubtful value." Sculpture in France and Germany during the early 19th century was also dominated by neo-classic concepts.

The same thing is true of the first attempts at sculpture in the United States. Of all the visual arts, sculpture was the last to appear in the young republic, a fact which can be explained by the complete lack of any need for it. Even as late as 1820, the painter John Trumbull discouraged a young stone-cutter who came to him for advice by saying that "nothing in sculpture would be wanted in this country for yet a hundred years." To men who persisted in pursuing their interest in sculpture in the face of such an attitude, there was but one course to follow, namely to go to Europe and study there. In the early 19th century, Europe meant Italy from an artist's point of view and there the Neo-classic was firmly entrenched. The effect of the training that was received by early American sculptors under such circumstances can be seen in the work of Hiram Powers (1805-73). There

is little to distinguish the *Greek Slave* (Fig. 230), which is his best known piece, from the rank and file of neo-classic work save possibly the sense of fact evident in the emphasis on inanimate details, such as the chain and the shawl, which is characteristically American. The pose is derived from the so-called Medici Venus, a late Hellenistic statue based on the Aphrodite of Knidos. The over-generalized modelling of the figure makes it seem very lifeless and cold but in spite of this, its nudity would hardly have been tolerated in puritan America had it not been for the title which appealed to sympathies already aroused by the Greek fight for freedom from Turkish rule. It was this sentimental and entirely unsculptural consideration, for example, which led a group of clergymen in Cincinnati to pronounce the statue unsubversive of public morals when they examined it prior to its exhibition in that city. The same reason must account for the popularity which made a reproduction of it an indispensable adjunct to any American household with pretensions to culture in the mid-19th century.



FIG. 230.—POWERS. GREEK SLAVE. CORCORAN ART GALLERY, WASHINGTON.

The consequences attendant upon the birth of American sculpture at the time when neo-classic ideals were predominant are evident even today. The feeling that an ideal figure must be treated in the classic manner is one of these, as well as the dependence on frigidly abstract symbols to invest such figures with meaning. The persistence of these ideas in American sculpture long after they had disappeared in that of Europe may be traced directly to the lack of artistic background in the United States

and the consequent absence of any critical sense. American sculptors clung to pseudo-classic Italianatè ideals long after their inanities had been observed in Europe and artistic leadership had passed once more from Italy to France where the Romantic Movement was in full swing.

In the Romantic Movement, the revolt against 17th century absolutism enters its second phase. It is distinguished from the earlier intellectual one expressed in the stale evocations of the neo-classic style by its emotionalism and insistence upon complete freedom of the artist to express his emotions according to his own desires. Such a personal point of view naturally resulted in a subjective and individual criterion of taste; the test of a work of art is whether or not it "grips you," rather than the extent to which the rules of good composition are followed. According to such a viewpoint, feeling is the proper material of artistic expression, rather than thought, *vide* Wordsworth's definition of poetry as "the spontaneous overflow of overpowering feelings." Such a concept has been encountered before; it is the very essence of the Baroque. But between baroque art and that of the Romantic Movement, there is this significant difference; the feeling expressed in baroque forms is impersonal and abstract while that which animates those of the Romantic period is individual and concrete too, at least as far as the artist is concerned. Here is the genesis of an attitude toward art that has not been invariably beneficial. The academic point of view was bad enough but at least it laid stress upon the need to learn the rules of artistic creation and thus made possible some understanding of it, objective though it may have been. But the Romantic point of view places the whole matter in the hands of the artist. The form taken by his creations depends entirely upon his own feeling and if the result is art for him, its meaning to anyone else is of no importance. Thus the effect of the separation of art from environment brought about by the Academies was intensified by the separation of the artist from his public produced by the Romantic Movement.

The art of sculpture was not the one best adapted to give full expression to a movement so lyric in character, for its material limitations turn it toward general rather than personal expression. The effect of Romanticism can be more immediately discerned in literature and painting but insofar as it appears in sculpture at all, it is seen in a return to principles somewhat like those of

the Baroque. Perhaps the most monumental example is the famous *Départ pour la Guerre*, better known as the Marseillaise, by François Rude (1784-1855) on the Arc de l'Étoile in Paris. Rude was never able, however, to throw off completely the effects of his academic training, and the work of Jean Baptiste Carpeaux (1827-75) is more completely in the Romantic mood. The group of *Flora* (Fig. 231) crouching among rollicking putti on the Pavillon de Flore of the Louvre in Paris consists of forms that



FIG. 231.—CARPEAUX. FLORA. PAVILLON DE FLORE, LOUVRE, PARIS.

are distinctly in the baroque manner but they are a translation into stone of the Flemish painter Rubens' style rather than a reversion to Bernini's. The influence of Rubens is apparent in the buxom figure of the kneeling woman which becomes frankly carnal by virtue of the extraordinarily skillful rendering of the flesh. The impression of movement in the figure itself is accented by the contrast between its flickering high lights and the deep shade of the background, a method that anticipates those of Rodin. Carpeaux is a pictorial sculptor, depending upon *chiaroscuro* effects rather than form and mass as a means of expression. It is these effects, however, that invest his figures with the *joie de*

œuvre that links his work to the Romantic Movement although it appears as an abstract quality rather than emanating from the figures themselves.

The entire achievement of French 19th century sculpture is summed up in the work of Auguste Rodin (1840-1917). This is tantamount to saying the achievement of all Occidental sculpture, for at no time, not even in the Middle Ages, was French art so completely dominant as in this period. Technically, Rodin's sculpture represents a continuation of Carpeaux's style in which expressive modelling gave the figures abstract vitality. He thus takes his place in the long line of French artists extending back through Clodion to the Flemish painter Rubens. But where Rodin's predecessors were content to achieve no more than a sense of movement in their figures, he attempted to make that movement expressive of psychological activity and in so doing, to give his figures character. In this respect, Rodin is akin to Houdon and, going back again to 17th century painting, to Rembrandt, both of whom were primarily interested in their subjects and bent their energies to the expression of character while more or less contemptuous of formal or absolute beauty in their figures. Thus Rodin's sculptures appear astonishingly real by virtue of the play of light and shade created by the expressive modelling of the surfaces which also bestows psychological validity upon the ideas they embody.

All of this is apparent in *The Kiss* (Fig. 232) in which Rodin set forth his conception of the ill-fated lovers Paolo and Francesca whose tragic story is told in the fifth canto of the *Inferno* in Dante's *Divine Comedy*. It illustrates admirably his frequently repeated statement that sculpture should consist only of successive hollows and projections; by means of them, the effect of actual warm flesh is strikingly simulated. This simulation was not an end in itself, however, for Rodin exaggerated many details to achieve a clearer expression of the inner meaning of the group. Notice, for example, the contrast between the tenseness of the man's hand and the lightness of its contact with the woman's thigh, and the convulsive contraction of the toes of his right foot. These and other similar contrasts in the group are eloquent of the passion animating the figures. But where the effect would be sensual and suggestive in the hands of an artist who aimed at nothing more than representation of the entwined forms, Rodin

deliberately made it abstract by veiling the heads in shadow and achieved thereby a more powerful expression.

In using light and shade to create an impression of actuality, Rodin was only availing himself of methods already employed by contemporary painters of the Impressionist school. The movement of surface that resulted from the play of light and shade



FIG. 232.—RODIN. THE KISS. MUSÉE RODIN, PARIS.

on the figure is part of the general movement of the entire body which is real to an extent never approached by any of Rodin's predecessors. In *The Kiss*, for example, there is no sense at all of artificially posed figures for the artist's analysis of their movements was so complete that he was able to give his representation of them every appearance of naturalness. Such a use of light and shade is pictorial rather than sculptural, yet with it, Rodin employed a closed contour that gives an exceedingly sculptural mass and weight to the figures. Their energy and life come from the strain of form and muscle within the contour and pic-

torial *chiaroscuro* effects are employed only insofar as they contribute to that effect and to create the sense of environment demanded by modern taste.

In Rodin's later pieces, much of the spontaneousness of *The Kiss* disappears and with it the beauty of the figures. To a large extent, this was due to his practice of theorizing concerning the function of sculpture and then creating his sculpture to illustrate the theories. Instead of embodying abstract ideas, as in *The Kiss*, his figures tend to become a sculptural interpretation of his own temperament which was notably bizarre in a time when the unusual was deliberately sought out, a combination of bitter pessimism and extreme eroticism. Thus he created a female centaur with outstretched arms, seeking to objectify the soul's struggle to raise itself above the level to which it is restrained by mortal flesh. Rodin failed to give significant expression to this idea, and failed because he was unable to clothe it with formal beauty. Michelangelo, inspired by a similar concept, produced the symphony of volumes which is the Medici Tombs. It is this essential of sculptural beauty, form in arranged and related masses, that Rodin's later work lacks, or, to put it briefly, the organization that means style. In *The Kiss*, the emotional content of the group acquires ideal meaning by virtue of formal arrangement to which the naturalism of the figures gives power and intensity. It thus becomes a moving symbol of the tragedy inherent in modern life, the soul attempting to find surcease from its besetting fears and uncertainties in the purging emotion of love.

At first glance, the *Adams Memorial* (Fig. 233) by Augustus Saint-Gaudens (1848-1907) seems to have very little in common with *The Kiss*, yet both of them reveal the sense of doubt that is the tragedy of the modern mind. The figure was commissioned by Henry Adams in memory of his wife, the only specification being that it should convey a sense of the loss that he felt in her death, leaving the form that it should take to the sculptor. This idea Saint-Gaudens interpreted by suggesting overwhelming depression in the figure, an effect attained by the broad and simplified folds of the ponderous draperies, made abstract by the simplicity of the background and the sexless face of the bronze figure and given poignancy by the single visible arm and the listless fold between the knees. The result is a sense of spiritual exhaustion for its repose is that of weariness rather than quiet and

serene faith. The various names that have been applied to the statue, "Grief," "Death," "The Peace of God," all show the breadth of the sculptor's concept which acquires universal meaning in the abstractions of figure and setting. To every observer, it gives in measure according to his spiritual need, whether he be cynic or believer. It thus stands for all that modern man feels



FIG. 233.—SAINT-GAUDENS, ADAMS MEMORIAL. ROCK CREEK CEMETERY, WASHINGTON.

of life in the hereafter, just as the Hegeso Stele (Fig. 163) reveals the calm objectiveness of the Greek and the Saint of the French *détente* (Fig. 197) the serene and trusting faith that was the finest flower of the Middle Ages.

The position of Saint-Gaudens in American sculpture of the late 19th century is comparable to that of Rodin in France in that both represent a summing-up of the technical and interpretative traditions that preceded them. Saint-Gaudens was able to introduce various technical methods in American sculpture by virtue

of his training in Europe, notably the delicate low-relief of Italian 15th century work and a revived appreciation of the significance bestowed upon sculpture by association with an architectural background. At the same time, his figures are American in the sense of fact apparent in them as well as their broad vague idealism, both characteristic of American thought from pioneer days. This apparently irreconcilable dualism is evident in American sculpture of the early 19th century which consists of vapid generalizations in the Italian manner, on the one hand, and mere translations of fact into stone and bronze on the other. Saint-Gaudens' great contribution to American sculpture was to unite fact and generalization to form a rugged and poetic harmony. Thus his sense of actuality gives poignance to the figure of the Adams Memorial, just as his lofty idealism makes the Lincoln in Lincoln Park, Chicago, the embodiment of all that the martyred president means to the American people, much as the Pheidias Zeus summed up all that could be thought of him by the fifth century Greek.

Returning now to the European tradition, we witness in the closing years of the 19th century and the first decade of the 20th a tremendous popularity of Rodinesque methods, evident in the vast number of figures turned out by his pupils and followers in which Rodin's impressionistic technique was employed to give expression to vague metaphysical ideas. In America, the outstanding protagonist of this mode was George Gray Barnard (b. 1863) at least as regards his earlier figures. Rodin's example was thus a powerful stimulus that awoke European sculpture from the academic torpor into which it had sunk. It was inevitable, however, that such a stimulus should be followed by a reaction against the technical and interpretative exaggerations that appear in Rodin's later work and that of his followers. Such a reaction is seen in the emphasis on sculptural form in the work of Aristide Maillol (b. 1861) in contrast to the pictorial methods of the older sculptor. In the *Seated Woman* (Fig. 234), Maillol conceives the sculptured human figure as a pattern of volumes, a manner which has led him to be characterized as the most Hellenic of living sculptors. It is not without significance, perhaps, that when he was in Greece, he was most interested by the Olympia sculptures, although it should be pointed out that Maillol's Hellenism is in no way an archaistic reversion to older forms. It is rather a matter of figures that are powerful, rugged and



FIG. 234.—MAILLOL SEATED WOMAN.

self-contained. To the realization of this conception, which might be characterized as classic rather than classical, Maillol adds a fine sensibility of the nature of his mediums; if Rodin's ideal was to translate marble and bronze into flesh, Maillol's is to transform flesh into stone, terra-cotta or bronze. More than this, he takes an obvious delight in the robustness and animal vigor of the body which is quite foreign to the classic point of view. But by avoiding the romantic interpretative attitude that is responsible

for the sensuality of Rodin's figures and by emphasizing the relationship between the masses of the figure as a whole, he achieves the necessary balance between abstraction and realism. If there are grounds for criticism in Maillol's sculptures, they lie in the simplification involved in his organization of form and the consequent lack of content. There is no suggestion of environment and the personal note is also lacking that is essential to a complete expression of modern thought.

The extent to which Rodin influenced his immediate followers appears in the literalness with which they interpreted one of the epigrams he was so fond



FIG. 235.—BRANCUSI. *Mlle. POGANY*.

of making, to the effect that mathematics is the basis of all good art. Rodin himself probably meant no more by this statement than to emphasize the necessity of formal arrangement in a work of art, but to his followers, it meant that the greatest validity of a painting or statue lies in the mathematical relationship underlying such an arrangement. Out of this attitude there developed the movement popularly known as Cubism. The aim of Cubist sculptors and painters was to portray the quintessential character of their subjects which they believed could be done only by emphasizing the mathematical relationships existing in them. Thus Constantin Brancusi (b. 1879) strives in his portrait of *Mlle.*

Pogany (Fig. 235) to portray the mental and spiritual character of his subject freed from the obscuring accidents of naturalistic appearance. To do this, he has carried the processes of selecting and modifying experience which are essential to artistic creation to the point where they come dangerously near to defeating their own purpose. There can be no denying the fact that the portrait of Mlle. Pogany has many sculptural qualities. It possesses the formal organization essential in a work of art. There is a fine feeling for the nature of the medium and it incidentally illustrates the interest of modern sculptors in rare and costly materials. But by carrying his conception of the subject entirely into the realm of the abstract, Brancusi's interpretation of it has become a purely personal one. The content is so rarified by lack of concreteness that it has no character. There is nothing intrinsic in the figure to relate it to the observer's experience save the formal organization and the sense of the material, both of which are abstract and impersonal qualities. By emphasizing them to the exclusion of the personal and the human, the sculptor deliberately deprived the figure of its most immediate appeal to the observer.

In contrast to Maillol and Brancusi whose works interpret modern thought by emphasizing certain aspects of it, there is a group of sculptors who are so overwhelmed by its complexity that they have no hope, and possibly no power, to express it at all. In consequence of this, they take refuge in the pure design of other periods, untainted by contemporary thought or feeling. This 20th century manifestation of the Romantic viewpoint is represented in American sculpture by the work of Paulanship (b. 1885). A decorator by temperament, Manship's training in the American Academy at Rome served to turn his attention to the classic styles. The repertory of forms he derived from them was later expanded by contact with art of the Far East. His development as an artist is the history of the absorption of these various influences to which may be added the factual sense apparent in his portraits. The fusion of all these elements into what may be considered Manship's personal style has produced such figures as the *Prometheus* (Fig. 236) on the Radio City Fountain in New York City. It is characterized by great technical skill in the handling of bronze, a notable feature in all Manship's work, it is decorative, and utterly devoid of meaning. The motive of the flying fig-

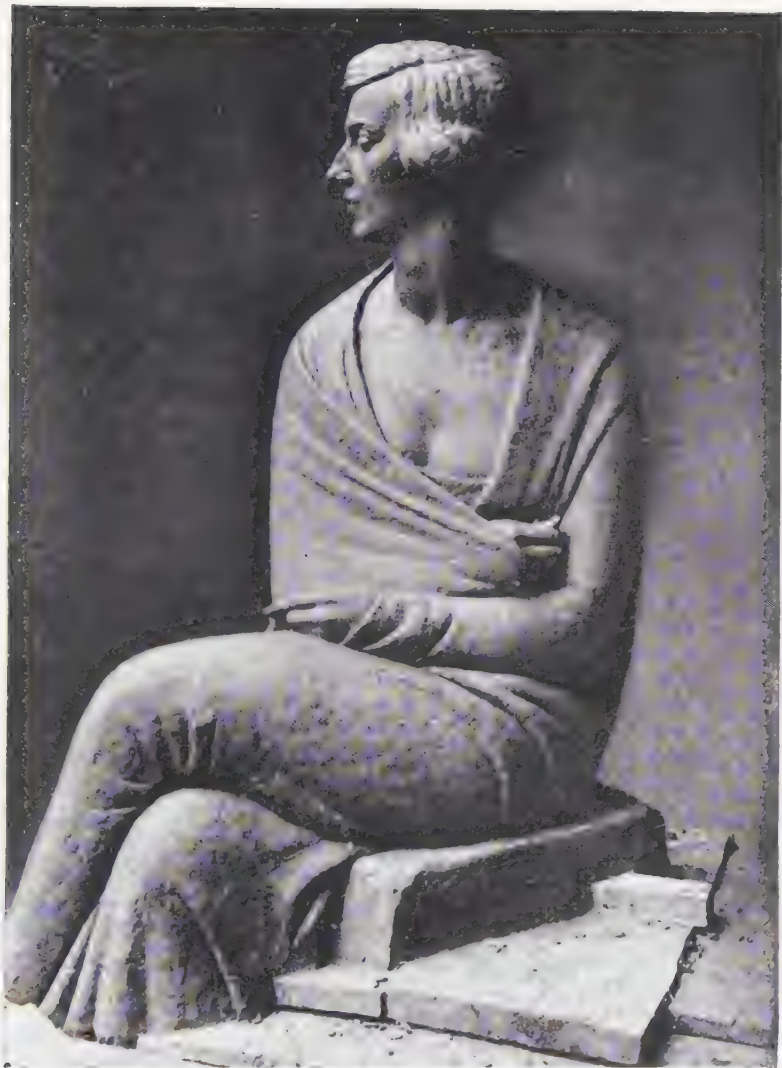
ure has been used by the sculptor in three other works and the idea of the band with signs of the Zōdiac comes from a fourth, objective proof of the sterility of such an eclectic conception of art. Unrooted in experience as such a conception is, it leaves the door open to all the eccentric methods of conveying mere impressions that pass current muster for the synthesis of profound meditation upon experiences of life and logical analysis of them which is the foundation of all great art.

In striking contrast to the decorative emptiness of Manship's figures is the virile force that permeates those of Ivan Meštrović



FIG. 236.—MANSHIP. PROMETHEUS. RADIO CITY, N. Y.

(b. 1883). A native of Yugoslavia, his sculpture is intensely nationalistic in spirit. The forms he employs reproduce Balkan types and however incongruous this may appear in his statues of equestrian Indians in Chicago, it is a source of tremendous power in his evocations of the ideals of his own country. Such is the bronze *Portrait of a Lady* (Fig. 237). Outstanding in its technical features is the simplification of the draperies, reduced to a pattern of broad folds which effectively suggest the massive volumes of the body they cover. This effect is obtained by a system of planes which he also employs in relief sculpture,



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FIG. 237.—MEŠTROVIĆ. PORTRAIT OF A LADY.

a field in which none of his contemporaries have attained greater distinction. The head is fine portraiture, realistic in type yet formal in pattern and imbued with the calm serenity of profound assurance. In the objectiveness of the portrait, there is something of Hellenic impersonality, yet it is far from the calm impassiveness of Maillol's figures. The directness of its impact upon the observer has in it much of the intense humanity that ennobles



FIG. 238.—MILLES. TWO DANCERS.

Rodin's best work, yet it speaks through means that are essentially sculptural. It gives the effect of profound emotion, but the emotion is in the spectator rather than the figure. To the command of form that Meštrović reveals in his treatment of plane and volume, there must be added an incomparable sensitiveness to materials, evident in the feeling that the bronze of the portrait has actually melted and flowed instead of being transformed by some mysterious alchemy from clay or plaster. Meštrović's least effective work is usually so by virtue of a force that verges on the brutal. In his best, there is a balance of realism, formal design and content that indi-

cates him to be beyond doubt one of the greatest living sculptors.

There is a very definitely international style in sculpture since 1925 just as in architecture. One of the foremost exponents of this style is the Swedish sculptor Carl Milles (b. 1875) and its quality may be seen in the *Two Dancers* (Fig. 238) by him, exhibited at the Century of Progress Exposition in Chicago in 1933. The group is in bronze, the medium which Milles prefers, although he works in all of them with equal dexterity. His early study under Rodin is evident in the expressive surfaces which also reveal a fine sense of the fluent quality of cast metal as in

Meštrović's work. Another detail that bears this out is the metallic quality of the curled hair. The group is primarily a study in decorative rhythm, the movement of one figure being repeated in the other but with sufficient variation to give it interest. The unity thus attained in the group is further emphasized by the straightforward joining of the hands which is quite adequately motivated by the realistically rendered movement. The archaism of the faces may be open to criticism but it cannot be denied that it adds a note of piquancy to the carefree joyousness of the pose. It is interesting to compare Milles' archaism with Meštrović's, who employs it as a means of imbuing his figures with primitive force, or with Manship's which is only mannerism. Not the least element that contributes to the distinction of Milles' figures is his unerring sense of their surroundings. The appropriateness of the Two Dancers to the blithe and light-hearted atmosphere of a great exposition is obvious. Similarly ingratiating are his fountains which are designed with a feeling for the play of water as well as for the forms themselves, and which equal if they do not surpass the masterpieces of baroque fountain design. In his more serious work, such as the monuments to the great heroes of Swedish history, Folke Filbyter and Gustav Vasa, Milles demonstrates conclusively the capacity of his style to give expression to the same lofty ideals that animate Meštrović's more rugged figures.

From the work of the last four sculptors that have been discussed, Maillol, Manship, Meštrović and Milles, it is possible to derive some idea of the varied character of modern sculpture. For each one, the function of sculpture is different, ranging from decoration in Manship to the embodiment of a powerfully nationalistic sense of racial solidarity in Meštrović, from emphasis on exclusively sculptural qualities of static massive form in Maillol to well articulated movement in Milles. These contrasts serve to bring before us the peculiar position of sculpture as an art today. Of the three arts considered in this book, sculpture seems to be the least vital at the present time, a fact which can be attributed directly to the absence of any profound need for it. As compared with architecture, it lacks, of course, the practicality that must always relate the art of building to its environment. As compared with painting, it does not possess the capability of adaptation to the modern interior from a decorative point of view nor does it possess the elasticity as a medium to make it capable of expressing

the comprehensive experiences of modern life. As a consequence of these facts, there is a very limited patronage for sculpture, consisting almost entirely of demands for purely decorative work such as Manship's or for memorial figures and portraits. Another factor that conspires to prevent the development of a monumental sculptural style is its relative costliness. The expense of executing an architect's designs does not fall upon him; the cost of a painter's materials need not be great. The sculptor, on the other hand can hardly venture to create a monumental figure unless it has been commissioned and as has been pointed out, such patronage is strictly limited. The result is that he is unable to work out the innumerable problems that must be solved in the process of developing a significant and powerful style. Sculpture thus falls to the ground between the more personal art of painting and the more practical one of architecture. Its revival will come about only when there appears once more a broadly comprehensive view of experience that can be expressed in the sculptural terms of related mass and volume.

PAINTING

CHAPTER XXIV

PAINTING: PRINCIPLES AND TECHNIQUE

TO THE average person, art almost invariably means painting. Architecture is generally considered to be the science of construction rather than an art. Sculpture, as we have seen, plays a relatively small part in our lives today and so does not receive much consideration as an art. But painting in one or another of its various forms is an every-day experience, in advertisements, magazine illustrations and as wall decorations to mention only a few. In the popular mind, the term artist carries with it the connotation of *painter* and can mean anything else only if it is specifically stated. What, it might well be asked, is the reason for this and why is painting the most generally practiced of the visual arts today?

To begin with, painting is a more flexible medium of expression than either architecture or sculpture and hence capable of a greater scope of effects. In this respect, it can be compared with the piano which, as a medium of musical expression, can produce both harmony and melody, employing the extended polyphony that is a legitimate orchestral effect and also the melodic line appropriate to vocal music or that of the solo wind and string instruments. So in painting it is possible to convey effects of space, which we have seen to be an essential characteristic of architecture, and also of plastic form which lies in the province of sculpture. The painter, working in a medium more fluent than either architecture or sculpture, is able to incorporate effects in his paintings which are legitimate in both of the other art forms. His advantage over the architect or the sculptor is that he is not restricted as they are by the danger of sacrificing effects appropriate to their respective arts if they attempt to go beyond them. Iktinos, for example, in designing the Parthenon (Fig. 15), treated it as a sculptural form and space-implying effects were relegated to a secondary degree of importance. Bernini, on the other hand, in his *Santa Theresa in Ecstasy* (Fig. 223), employed every available means to suggest space, not only that in which the group

exists but also that which extends far beyond. In consequence of this, the group lacks the sense of heavy plastic volumes which we look for in sculpture. In contrast with these limitations of architecture and sculpture, painting can suggest both space and plastic form and is so able to produce cumulative effects of realistic appearance that are both more immediately and more powerfully appealing than the abstract ones to which the other visual arts are limited. To this is due in great part the more general appreciation of painting than of either architecture or sculpture in our own time.

In view of this greater fluency enjoyed by painting, it may seem a paradox to state that in some ways, it is also more abstract than either architecture or sculpture. To revert to the earlier simile, the piano, capable of the massive harmonic effects of the orchestra as well as the melodic ones of vocal and solo instrumental music, is yet incapable of the contrasted tonal colors and textures possible in them. Instead of the shimmering tone of flutes, harps and violins that pours from the orchestra, the piano can produce only a cascade of notes all more or less similar in quality. The continuous melodic line of the voice or violin becomes a series of isolated tones to which even the greatest pianist cannot give the organic flow which characterizes the products of the others. On the piano, in other words, effects possible in other forms of musical expression can be rendered only in an abstract form which bears no more than a suggestive resemblance to them. In similar fashion, the painter does not deal with actual space like the architect, nor does he have to do with tangible three-dimensional form like the sculptor. At best, those qualities can only be *suggested* in a painting. The reason for this is obvious. The painter, seeking to create a synthesis of analyzed experience, is limited to two dimensions, those of length and width. He can no more compose his picture in actual depth than the pianist can recreate the variegated tonal color of a symphony orchestra. Nor can he paint a figure, house or tree so that it is actually round to the touch any more than Paderewski can make his piano produce an unbroken line of melody that sounds like the human voice or the violin. He can only evolve abstractions of the realistic qualities of form and space, couched in pictorial idiom, and so suggest them to the observer.

The first step the painter must take, then, is to subject his three-

dimensional experience to a process of abstraction in order to express it in terms that involve only two dimensions. The extent to which this is true can be observed by turning for a moment to an example of two-dimensional representation in which this principle is violated, the "Gates of Paradise" by Lorenzo Ghiberti (Figs. 200, 201). In creating the panels for these doors, Ghiberti was working two-dimensionally to all intents and purposes. Space is suggested by skilfully varied planes in the backgrounds so that we sense an almost endless vista behind the figures. But the figures, at least those in the foreground, are so contrived that they stand free of the relief and have an actual third dimension, as a result of which they often cast shadows on parts of the background that are supposed to be an infinite distance away. This incongruity is a consequence of attempting to combine effects that have no common ground. Ghiberti was working partly as a sculptor and partly as a painter, employing figures with an actual third dimension in a two-dimensional scheme. Idioms of both arts are mixed together and an unalloyed effect of realism is impossible. The effect is much the same as that often observed in the theatre when the shadow of an actor falls on the painted backdrop and seems to extend miles away. In both cases, failure to attain a consistently real effect is the result of attempting to be realistic in terms which have no basic relationship to each other.

In striving to achieve the suggestion of the three-dimensional realities of form and space in a two-dimensional scheme, the painter has two devices at his command, perspective and modelling. Two perspective methods are generally employed, linear and aerial. Linear perspective is based on the fact that parallel lines receding into space from the observer seem to converge on the horizon. This phenomenon can be readily observed on a long straight road or railroad track, the sides or rails and the telegraph wires all appearing to come together at a single point on the horizon. Another of the qualities of linear perspective is that objects of the same size seem smaller the farther away they are from the observer. This involves the idea of scale, that is, the measuring of objects by each other, which is also an integral part of the two-dimensional portrayal of three-dimensional space. The second of the two perspective methods, aerial perspective, takes advantage of the diffusing, softening effect which atmosphere has upon the forms and outlines of distant objects. This can be ob-

served by looking at a tree that is close at hand and comparing it with one far away. The nearer one will be seen to consist of many individual leaves and branches, each quite clearly distinguished from the others in form and color. In the distant one, the individual parts merge, the brilliant green of the leaves becomes less intense and the whole outline is less sharp and clear. The representation of such an effect in a painting will suggest that the object portrayed is at some distance.

Both aerial and linear perspective were known to artists as early as the Hellenistic period (Figs. 175, 181, 240) although the former was more generally employed. Before the Renaissance, linear perspective was intuitively felt rather than intellectually grasped and it was not until Brunellesco evolved a system incorporating it to give an impression of reality to his architectural drawings that it was analyzed as in the method outlined above which depends upon relationships that can be mathematically determined. Ignorance of such a system was responsible for the curious distortions that have been noted in the architectural background of the reliefs of the Arch of Titus in Rome (Fig. 181).

Perspective is the device by which pictorial depth is suggested. To produce an effect of plastic form in painting, the painter employs modelling of which there are two types, modelling by contrasts of light and shade, or *chiaroscuro*, and by color. In either case, the result is to give the impression of objects possessing the roundness of form and solidness which our experience leads us to believe they have. *Chiaroscuro* modelling is based on the fact that an illuminated solid object will cast a shadow and that one side will be more brightly lighted than the other unless the observer happens to be directly between the object and the light source. The achievement of such an effect in painting often involves the use of color as in pictures in which shadows are a darker hue of the intrinsic color of the object itself. However, it is possible to suggest it with no other means than varying values of black and white (Figs. 276, 330). Many of the monochrome reproductions of paintings in this book illustrate this point for the photographic process reduces color modelling to values of gray. *Chiaroscuro* modelling has been employed by painters from comparatively early times (Fig. 240), but modelling in pure color was almost unknown before the end of the 19th century. It was Paul Cézanne, the great French Post-Impressionist painter, who

first made systematic observations of the receding effect of some colors and the advancing one of others. These characteristics he employed not only to give roundness and solidness to the objects in his paintings but also to secure effects of depth. It is the absence of color values in photographic reproductions that make Cézanne's pictures so hard to comprehend in that form (Figs. 356, 357), although in their actual presence, the sense of solid forms existing in space is very powerful.

The discussion up to this point has been directed by the belief (which is generally held) that painting is the art of portraying in two dimensions the appearance of objects that actually exist in three. This belief has been an exceedingly important element in the ideals of painters since the Renaissance and is still a consideration of great potency. It must not be forgotten, however, that there have been times when it was not the purpose of painting to produce such realistic, two-dimensional abstractions of a three-dimensional world. In the Middle Ages, for example, painting served ends that were didactic and decorative instead of striving to produce more or less realistic images of objects. Comparison of the stained glass window of the Madonna and Child in Chalons Cathedral (Fig. 244) with Filippo Lippi's matter-of-fact representation of the same subject (Fig. 270) will show how greatly the aim of the medieval craftsman differed from that of the Renaissance painter. The latter considered his panel an area upon which to record the lineaments of his mistress in a reasonably realistic fashion; to the former, the glass of the window was the means by which, to quote C. R. Morey, "the light of day became the Light Divine." To the supernal glow of his image, the realism bestowed by perspective and modelling would have been not only superfluous but detrimental. For similar reasons, the spiritual ideal which Stephan Lochner sought to express in his Adoration of the Magi (Fig. 253) appears disembodied of the incidentally realistic qualities which are usually felt to be essential to the painter's art.

The extent to which problems of representing the actual appearance of things have been the particular preoccupation of the modern painter is still further revealed if the use of the line as a delineating mechanism in medieval art be compared with that in post-medieval examples. In the illustrations of the Utrecht Psalter (Fig. 242), it will be seen that the artist has created his figures entirely by means of lines. Similarly, in drawings by Signorelli

(Fig. 276), Watteau (Fig. 330) and Daumier (Fig. 350) the figures are represented by combinations of lines. Between the medieval method of employing line and the modern one, there is this very important difference. In the former, the line exists as a thing in itself; the artist conceives his subject in terms of line and the line alone is real. Space and plastic form are disregarded, or suggested only insofar as the *idea* of those qualities seemed to the artist to be real. The opposite is true of the post-medieval examples. In them, the line has meaning only as it suggests the realistic qualities of form and space, as a two-dimensional convention for the suggestion of three-dimensional values. Thus in the Watteau, the roundness of the back is suggested by the curved line of its contour. The hatchings in the Signorelli result in a sense of solid flesh and muscle. In the Daumier, the line is thick here and thin there, a fluent instrument to suggest the vigorous lineaments of the famished pair. In all three, the line has meaning primarily as a symbol of some realistic characteristic, not as an esthetic end in itself as in the medieval psalter illustration.

Since the Renaissance, the primary purpose of painting has been the realistic portrayal of objects, an aim which is clear from the comparisons made in the two foregoing paragraphs. This is true even of paintings by ultra-modern artists, the Cubists, the Super-Realists, etc., who have sought to find in abstract formal patterns of line and color the "true" reality of things but have all too often expressed them in a manner so individual and personal that it fails to be convincing. It is this realistic quality of painting which has led to the frequent confusion of its aims with those of photography. The difference between them has already been dwelt upon in the Introduction. Here it will be said in addition that in itself, the photograph is incapable of making that distinction between the transitory and the significant which is the essence of artistic creation. To take but one instance of this, we have often seen photographs of tall buildings in which all the vertical lines converge because the camera was tilted upward when the picture was made. This distortion is due to the operation of the laws of linear perspective which the camera applies to vertical as well as horizontal lines. But the human eye accepts the horizontal convergence and rejects the vertical one. Even though we actually do see vertical parallel lines as converging, they are always interpreted by the mind as parallel. It is for this reason that when

we are confronted in the photograph with a mechanically accurate transcription of what we really see, we refuse to accept it as real for the camera only records visual experience without interpreting it. More than this is necessary if a picture is to be a true work of art.

The foregoing paragraph should not be taken to mean that the camera cannot be used as an instrument of artistic expression. In the hands of some men, it becomes a powerful tool, searching out the most characteristic aspects of things and portraying them in pictures of astonishing vividness. But it is a far cry from such products to the casual snapshots displayed in drug-store windows, as far as from Michelangelo's Creation of Adam to the insensate scrawls and blots of color produced by a kindergarten pupil. In neither case do we have to deal with a work of art but with something unilluminated by human personality and so devoid of significance.

The materials of the painter are pigments applied to wet plaster, canvas, wood panel or paper. The most familiar type of painting is done with oils on canvas, a method that has been employed since the Renaissance. Pigments mixed with oil provide a medium that gives richness in opacity of light and depth of shadow. Great precision and infinite nuance of color are possible to the painter in oils, since corrections and retouching are a relatively simple matter. On the other hand, oil paintings are subject to destruction by time. Unless the painter is highly skilled in the science of sizing the canvas, mixing his oils with pigments, varnishing the canvas, he cannot expect his pictures to last more than a few years.

Before oils were generally used, a type of painting called tempera was popular. Egg was mixed with dry pigment, and resin or wax added for transparency. This substance was applied to prepared wood panels. In appearance such painting sometimes resulted in flat dry effects like fresco and sometimes attained the richness of oil, depending upon the mixture. The most permanent type of painting is fresco. In this process colors are mixed with water and applied to fresh plaster which absorbs the color. Since the pigment has been incorporated with the plaster, it will last until the wall is destroyed. Fresco painting requires great skill and knowledge to be used effectively. Each day the painter must have prepared a small area of fresh plaster which has to be

painted before it dries. Once dry, it cannot of course be altered or retouched, so the master must work with great speed and sureness of hand. Fresco painting flourished during the 15th and 16th centuries, when Masaccio, Michelangelo, Raphael and Tintoretto and many others covered the walls of Italian churches with their great masterpieces. Mural painting in fresco has recently been revived by the Mexican masters Diego Rivera and Orozco and the American painter Thomas Benton. San Francisco, Indianapolis, Dartmouth College, New York and Detroit, have great walls decorated by these men.

Pastel is a process more recently invented than any of the foregoing. The pigment is bound so as to form a crayon which is applied directly to the surface, usually paper. Pastel is a delicate and seductive medium, but subject to damage. It is customary to spray it with a fixative lest the dry powdery color rub off. Water color is a process familiar to every school child. Here colored powder is formed into cakes with gum arabic, then mixed with water. The transparency of the medium allows the paper to show through, adding its own color and luminosity to the finished effect. Though most popular with the amateur and dilettante, water color is a difficult medium. It was much used by the Old Masters for studies and preparatory sketches.

With painting we may group the *graphic arts*, the art of the black and white print. The woodcut, the etching and the engraving were first developed in order that many copies might be made of a single work. But instead of continuing as a mere reproducing medium, these processes have become definitely established as techniques with laws of their own. In the case of the woodcut, a drawing is made upon the long grain of a block of wood. With a sharp instrument, the artist gouges out the parts that are to be white in the picture, leaving the parts that are to be black flush with the surface of the block. The block is then inked and pressed upon the paper which absorbs the ink. With etching and engraving the process is just the reverse. The engraver gouges out of his copper plate the parts that are to be black. His sharp graver digs out grooves in the copper plate, which is then sponged with thick black ink. When the surface is wiped clean the ink remains in the grooves, and under the pressure of the press the spongy paper is forced into these, where it absorbs the ink. The result is a crisp definite linear impression. In etching the

metal is covered with a thin coat of gum. Then the artist draws a picture in the gum with his pointed etching instrument, laying bare the metal beneath. He then places the plate in an acid bath. The acid acts upon the exposed metal, the part under the gum being unaffected. When sufficiently bitten, the plate is taken from the bath, the gum removed. The plate is inked and wiped, the ink catching in the bitten places. Then it is pressed against the paper as in the case of the engraving. The plates and blocks may be used again and again, though of course they deteriorate after many impressions have been made.

CHAPTER XXV

PAINTING BEFORE 1300

THE history of the art of painting goes back to the earliest periods of known human existence. The prehistoric caves of southern France and Spain are painted with great forms of boars and bison, the game hunted by man and painted by him as a part of primitive religious belief. In dark colors or incised outlines, the animals are portrayed with remarkable fidelity to fact in spite of the great simplification of detail. The artist has caught with unerring eye the most characteristic features of form and movement and represented them with a technique that emphasizes the salient facts and excludes those which are not. The art of the cave dweller was fundamentally realistic and dealt for the most part with isolated objects. Large compositions or those involving a relationship of several objects are rarely found, and when they are, reveal little in the way of formal organization. The genius of the painter does not lie in this direction but in that of recreating a credible symbol of the thing he wishes to portray.

In Egypt, painting hardly existed as an independent art. For the most part, it was an accessory to the conventions established in relief carving (Fig. 144). In the innermost recesses of the tomb it portrayed in graphic form on the smooth walls the innumerable activities of the slaves of the deceased who performed their stated tasks for him in the next world. In the vast dimly-lit hypostyle halls, it gave accent to the huge figures of gods and Pharaohs engraved in the surface of the massive columns. In both cases, painting was not permitted its own forms and arrangements but was forced to conform to an architectural decorative scheme. Even the more informal subjects, which reveal an observation as keen as that of the prehistoric painter, are portrayed with figures whose stiffness contrasts strangely with the sense of life that often emerges from them in spite of the rigid formulas that dictate their appearance.

Painting in Greece, as in Egypt, was largely an accessory art.

Writers of antiquity have described great paintings that adorned the walls of temples, but no trace of the paintings remains today. Vases were decorated with lively scenes of religious and mythological subject (Fig. 239). But painting as it is now conceived, a picture that hangs on a wall, did not exist until the Hellenistic period. Architectural painting, whether in the form of fresco or mosaic, was conditioned by the requirements of the building itself, that is the size of the painting was predetermined and the composition was always of such a nature as to be subordinate to the dominating architectural design. So also was the painting on the numerous vases that constitute the most abundant examples of Greek methods in the art. Nothing could demonstrate more clearly the innate love of beautiful form that characterized the Hellenic temperament than the care with which these purely utilitarian objects were designed, both in shape and decoration. The painting is applied to the vase as a glaze on the surface which becomes hard upon being baked in the oven. Various effects are possible, the earliest examples having black figures on a reddish-brown background, the natural color of the fired clay. Later, as in the example illustrated, this is reversed, and the figures are of the lighter color against a black background. Still another method is seen in vases made of a clay which becomes creamy white when fired, this surface serving as a background for figures that are drawn in outline against it.

The example illustrated (Fig. 239) is from a vase in the Boston Museum of Fine Arts, made about 440 B.C. It is thus contemporary with the Parthenon frieze with which it reveals many affinities. The subject is taken from the eleventh book of the *Odyssey*, the meeting of *Odysseus* and the *Ghost of Elpenor in the Underworld*. The figure to the right is *Hermes*, who is not mentioned in the Homeric tale, but appears in his function as the messenger of the gods among whose duties was the escorting of souls to the next world. *Elpenor* stands in a trench filled with blood from the slaughtered sheep that magically gives him temporary substantiality. Before him *Odysseus* sits with drawn sword to fend off the spirits who wish to drink the blood. The style of the figures and the treatment of the background reveal similarities with contemporary relief sculpture. The proportions and muscular torso of the figure representing the ghost of *Elpenor* are not

unlike the same details in figures of the Parthenon frieze (Fig. 161), being derived from the canon of Polykleitos. The head of Odysseus should be compared with that of the man standing behind the horse in the frieze, particularly with regard to the treatment of the profile eye. But the painter has not hesitated to portray Elpenor in a three-quarter pose which is much more complicated than the straight frontal or profile figures in the frieze, his success being due in part no doubt to the greater flu-



FIG. 239.—ODYSSEUS AND THE GHOST OF ELPENOR. GREEK VASE PAINTING IN THE MUSEUM OF FINE ARTS, BOSTON.

ency of his medium. In the suggestion of setting in the vase painting there is seen what appears to be a variation from normal fifth century practice which generally eliminated the surroundings altogether. It occurs here because the setting is specifically described in the passage in the poem which it illustrates. Notice above all the highly decorative quality of the composition. This consideration dictates the form of the rock Elpenor leans against, for example, a flowing line which conforms to the silhouette of the body. The names inscribed above the figures also have a decorative function, to fill in what would otherwise be awkward gaps

in the composition and to adapt the whole scene to the space available on the side of the vase.

In turning from the fifth century vase to a painting made in the 1st century A.D. (Fig. 240) the first reaction is that it can



FIG. 240.—THESEUS. HELLENISTIC FRESCO FROM POMPEII. MUSEUM. NAPLES.

hardly be a similar art. The fresco, in the Hellenistic style, is of the hero *Theseus* emerging triumphant from the labyrinth after slaying the fabulous Minotaur. It was probably copied from a Greek original but the Hellenistic painter has put into his painting the results of observing all the myriad phenomena of light and space to which his predecessor was deliberately oblivious. In the scene of *Odysseus* in the Underworld (Fig. 230) neither light

nor space is suggested. The modelling of the figures is achieved entirely by curving lines. The setting is suggested by the same means, and the whole scene is reduced to a flat decorative pattern. In the Hellenistic fresco, the background actually seems to recede in space, due to the contrasted light and shade on the walls of the room. The figure of Theseus may have been inspired by a statue such as the Apoxyomenos by Lysippos (Fig. 170), but again the modelling is achieved by contrasted areas of light and dark very different in effect from the linear method seen in the fifth century painted figures. The crowds of people at the side are grouped in such a way as to suggest the space even more, and are subordinated to the main figure by the grouping and the shadow that partially obscures them. Throughout, with the exception of the sharply outlined figure of Theseus, the forms are blurred and hazy as if dimmed by atmosphere, again contrasting with the boldly delineated silhouettes of the scene from the Odyssey. This effect of form diluted by atmosphere is also apparent in the pastoral reliefs of the Hellenistic age (Fig. 175).

All of these qualities in the Hellenistic fresco are indicative of an increasing consciousness of the proper scope of painting as a specific art. It has already been mentioned that the free picture as contrasted with the architectural one made its first appearance in this period. In addition to loosing itself from the bonds of architectonic requirements, painting is beginning to realize some of its own peculiar powers. The most significant of these is the representation of objects in a definite and comprehensible space. In the vase painting (Fig. 239) the figures are primarily subordinate to an imposed decorative scheme, but in themselves, they partake more of the quality of sculptured forms than painted ones. In the fresco, on the other hand, the effects of light and shade that give form to the figures are characteristic of painting. Thus at a time when sculpture had more or less exhausted its limited repertory of effects and subjects and was evolving brilliant but meaningless and mannered technical showpieces, painting was only beginning to realize the extent of its still unexplored possibilities. The visual point of view that it adopted, whereby rendering of form and space is achieved by a play of light and shade, is in strong contrast to the formal one which dominated the earlier period and reached its climax in the architecture and sculpture

of the Golden Age in the characteristic effects of plane and volume there revealed.

The development that occurs in painting during the Hellenistic period is a manifestation of the changing point of view in thought of the Mediterranean world. The civilization of the fifth century was dominated by Athens which was in actuality little more than a provincial town. Its philosophy had been developed to meet certain very restricted requirements and the art which gave it expression was similarly restricted in scope. It was an art of form, and little else was considered of significance in comparison with that. In contrast with Hellenic civilization, that of the Hellenistic world was extensive geographically and cosmopolitan in character. Its philosophy was broad and comprehensive, including man's relationship to his surroundings instead of being limited solely to human values as had been that of the earlier period. It was a natural result of this mode of thought that the eyes of artists should have been opened to the many aspects of nature which the purposely narrow vision of the fifth century had never observed. The effect is apparent in the sculpture of the period as has been pointed out. But the very nature of the widened comprehension of natural phenomena in the Hellenistic world made painting the logical form of its expression. Art moves from a world of form into one of space filled with depths of shadow and gleaming light, from a world of sculpture into one of painting.

The enthusiasm with which this illusionistic art of light and shade and spatial effects was received is apparent in the important part played by such effects in Roman art. In the reliefs of the Arch of Titus (Fig. 181) in Rome, the whole purpose of the artist is to force the recalcitrant stone to the effects which contemporaneous painters were able to attain so easily. Even in architecture, a sense of space achieved by light and shade is an important element (Fig. 24). In painting, it lends surprising naturalism to the extensive landscapes which the Roman added to the repertory of the artist, thus posing the final problem of realistic representation, the convincing relationship of objects to infinite space. In the brief period of a few hundred years, classic art thus passed from a stage in fifth century painting which for all the greatness of its achievements is still the embodiment of a primitive mode of thought, to the realistic landscapes of Roman painting which at least forecast the comprehensive complexity

of modern life. The unsparing realism of Roman art is accounted for as the characteristic product of minds overwhelmed by the extensiveness of human experience and seeking to find its significance in concrete terms.

During the First Millennium, painting, like architecture and sculpture, was taken over by the Church. Its immediate purpose, at least as far as its monumental forms are concerned, was a didactic one, to give instruction in the dogma of the Christian faith to



FIG. 241.—THE STORY OF ABRAHAM. MOSAIC IN S. VITALE, RAVENNA.

those who could not read. The walls of churches were decorated with fresco paintings and also with mosaic. This latter form of painting consists in working out a design by means of small cubes of colored glass or marble which are set in the plaster of the wall while it is soft and firmly held after the base has hardened. A characteristic example appears in the decoration of the choir at S. Vitale at Ravenna (Fig. 241) made about 550 A.D. The main subject in the semi-circular lunette is the *Story of Abraham*. At the left is the incident of the three angels and to the right is the Sacrifice of Isaac. In the upper left hand corner

is the prophet Jeremiah and at the right is Moses receiving the Ten Commandments while below are the murmuring children of Israel. It is obvious that between the time of the Hellenistic fresco of Theseus (Fig. 240) and the middle of the 6th century, there has been a considerable decline in the ability of artists to represent the appearance of things. This is especially true of the spatial relationships which are suggested in the earlier work. The grouping in the central lunette is reduced to a single plane even though it is quite clear that the artist wished to suggest that the seated angels are farther back than the other figures. Comparison of the group of Jews at the right with the crowd of people in the Hellenistic fresco reveals the same contrast. Incapable as he was of creating a realistic representation of the subject, the artist has emphasized decorative elements. The whole work is an adjunct to the architecture of the building, and the absence of spatial implications thus preserves the integrity of the wall surface. The hills of the background are suggested by a rhythmic succession of cylindrical objects and the draperies are reduced to a formula of lines radiating fan-wise from a single point.

The meaning of the entire composition is a symbolic one. Dramatic and representative values are subordinated to symbolic ones. In themselves, the subjects represented have little dramatic significance, a fact readily demonstrable by the inclusion in one composition of two different incidents. But both together represent the idea of Abraham who stood, in medieval theology, for the old order of Jewish faith which was transformed into the new one of Christian belief by the death of Christ on the cross, symbolized here by the Sacrifice of Isaac. This symbolic idea is carried out still further by the figures of Jeremiah and Moses who represent the Old Law just as Christ, symbolized by the Cross held by the flying angels, represents the New Law. The artist makes no interpretation as later ones might; he merely presents his subject for contemplation. The figures in the lunette could mean to a Christian only those of the story of Abraham. For the figures of the prophets where the identification might not be so easy, the artist has used inscriptions. But the effectiveness of mosaic ornament goes beyond its adaptation to the architectural setting or its exposition of a point of abstract theology. Their greater purpose was an emotional one, achieved by the gleaming gold backgrounds and the luminous colors which glow softly in the

darkness of the interior and bestow upon it the effect of a living entity. Under such conditions, the figures take on a mystic significance which completely transcends their objective representation.

In the spiritual chaos of the Dark Ages, painting suffered much the same fate as architecture and sculpture. The subjugation of the Latin empire by the barbarians put an end to the late flowering of classic art, modified by Christian thought and feeling, which appears in the Ravenna mosaics. When Charlemagne erected his chapel at Aix-la-Chapelle (Fig. 39) after a design based on that of S. Vitale, he could not find artisans capable of covering its walls with mosaic and left them bare. But even though monumental painting is so rare between the 6th and 11th centuries as to be almost non-existent, the small pictures that adorn the pages of illuminated manuscripts furnish a connecting link between the painting of the early Middle Ages and that of the later period. In this continuity of evolution, medieval painting differs from both architecture and sculpture. There is some employment of the latter, it is true, in the ivory covers of the manuscript books, but they are of such small dimensions that they are little more than translations into low relief of painted miniatures from which they were usually copied. The importance of the manuscript illuminations is considerable. In them were preserved the traditions of representative art which were destined to serve as vital elements in the painting and sculpture of the Romanesque and Gothic periods.

It has already been pointed out that the art of the Middle Ages represented a fusion of three elements. One of these is the classic tradition with its embodiment of an ideal of physical or moral beauty which was expanded in Hellenistic and Roman times to include landscape and setting as well as the human body. The second is the Byzantine tradition whose outstanding characteristic is its decorative unity. These two elements are represented in our illustrations by the Hellenistic fresco (Fig. 240) and the Ravenna mosaic (Fig. 241) respectively. The third element is that contributed by the barbarian tradition which is best described as the idea of effective force made evident in powerful decorative abstract patterns wholly unlike those evolved by the classic tradition. It appears in its purest form in the illuminated initial letters of the Book of Kells, an Irish manuscript of the 8th century, in pat-

terns of line that are utterly unreal and unsymmetrical but possessed of a unity which can be the result only of the sheer vitality and continuity of the line itself. In itself, this barbarian mode of expression did not develop a formula for the representation of the human figure for it gained its effects chiefly by means of abstract geometrical forms. But when it came in contact with the classic and Byzantine traditions through the medium of Hellenistic art, it galvanized their forms with new life and produced a style that was the embryo from which the monumental sculptures and paintings of the Romanesque and Gothic periods were destined to grow. The manifold aspect of this style is best seen in 9th and 10th century manuscript illuminations, the most significant artistic achievements of the short-lived Carolingian Renaissance initiated by Charlemagne's desire to recapture the glory that had been Rome and continued sporadically under his successors.

There are many different styles of Carolingian illumination, each having been developed in one of the various monasteries to whom Charlemagne had entrusted the reestablishment of classic culture. They can be grouped together, however, in two main categories, the East Frankish and the West Frankish, according to their stylistic characteristics and the geographical distribution of the monasteries in which they originated. The East Frankish style included the output of a monastery at Reichenau which can be considered as typical of the whole, while the West Frankish manner is best observed in the manuscripts that form the Reims school, so-called by virtue of the fact that most of them seem to have originated in monasteries near that city. Much though the two styles differ in details and effect, the basic intent of both is the same, to give expression to the ideal of vital force which was the Teutonic contribution to the background out of which grew the culture of the later Middle Ages.

The outstanding example of the Reims style is the series of pen drawings in a Psalter in the library of the University at Utrecht in Holland. These drawings are naïvely objective in their references to the accompanying text as in the *Illustration to the 74th Psalm* (Fig. 242) in the English version. At the very right is the figure of Christ on a high mountain representing Zion, described in the second verse, extending a wand toward the sun, moon and stars and two figures symbolizing Summer and Winter.

mentioned in the sixteenth and seventeenth verses. In the center are the enemies of the Lord breaking down the carved work of the temple with axes and hammers. At the right is the Nativity, a symbolic reference to the twelfth verse, "For God is my King of old, working salvation in the midst of the earth." In the left foreground a wingless angel smites the heads of the dragons in the waters as described in the thirteenth verse and at the right are the people of the wilderness cutting up leviathan



FIG. 242.—ILLUSTRATION TO THE 74TH PSALM. UTRECHT PSALTER. UNIVERSITY LIBRARY, UTRECHT.

to be meat, as in the fourteenth verse. The artist who made this drawing was evidently trying to copy with pen and ink a miniature in the illusionistic style that prevailed in late classic painting. The personifications of Summer and Winter continue an anthropomorphic type of symbolism that had its origin in Hellenistic art. In the heads, the representation of the eye by a triangular dab that suggests the shadow in the eye socket carries over from an illusionistic original. But these are only details that indicate the source of the figure style seen in the Utrecht Psalter drawings, for the purpose of the artist was not the suggestion of form

in space but the expression of dynamic force by the intrinsic vivacity of linear movement. It is probable that the Carolingian artist was attracted to the illusionistic style of the Hellenistic original by its lively play of light and shade, but that effect was translated in his own work into linear terms. The West Frankish

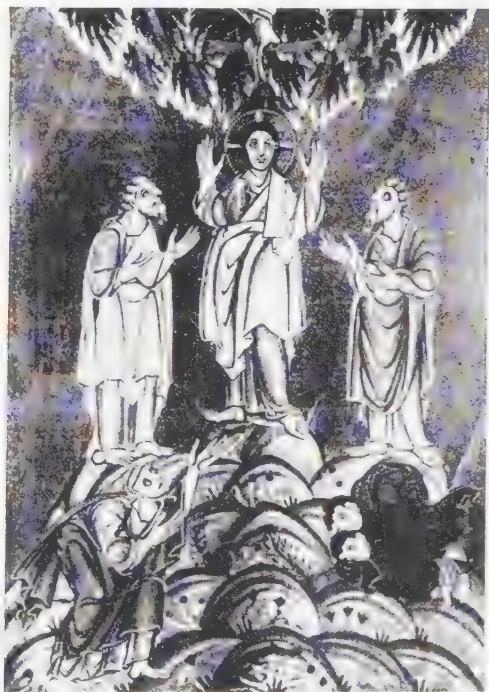


FIG. 243 THE TRANSFIGURATION, GOSPELS OF OTTO III LIBRARY, MUNICH.

style that appears in the linear illuminations of the Reims school acquired great prestige and spread over the better part of western Europe, as far as England and Spain. Miniatures in this style served as models for the scenes on the Hildesheim Doors (Fig. 185) and the Prophet Isaiah at Souillac (Fig. 188) in which linear effects predominate in a style that is monumental rather than descriptive or narrative.

The East Frankish style was also derived from Hellenistic art,

but instead of the vivacious illusionism that the Reims style translated into linear terms, it took the solid and sculptural figures. Thus the figures in the *Transfiguration* (Fig. 243) from the Gospels of Otto III, which dates from about 1000, retain something of the classic in their restrained gestures and bulky forms, quite different in effect from the exaggerated movements and wispy, wind-swept figures in the West Frankish style. But the antique types are transformed into one that embodies a Teutonic ideal of effective force in the head jutting forward on the shoulders, the staring eyes and the huge misshapen hands and feet. It is static force rather than dynamic as in the Utrecht Psalter miniature whence it was reticent of the emotional intensity of the linear style but it is none the less a northern concept and one which owes only little in the form of its expression to classic models. Like the West Frankish style, the eastern one exercised a definite influence upon later art. It furnished the direct inspiration for the bulky, crudely powerful figures by Guglielmus on the façade of Modena Cathedral (Fig. 189). When the emotional fervor of Romanesque France, which found expression in the contorted forms of the monumentalized Reims style (Fig. 188), had begun to yield to intellectual discipline in the Gothic period, the consequent need for static strength in its forms of expression was filled indirectly by the East Frankish style through the medium of North Italian Romanesque sculpture.

The importance of Carolingian painting lies in the fact that it gave expression to medieval concepts long before they were sufficiently defined to be embodied in sculpture and architecture. In the Romanesque and Gothic periods, the need for monumental expression led to a tremendous development of the latter arts, as has been seen, and painting also underwent a very considerable modification. In the form of stained glass, it played an important part in the emotional effect for which the Gothic builder strove. It is obvious that the elimination of walls which was a part of the Gothic architectural development made it impossible to employ traditional methods of fresco or mosaic for painted decoration. But in the stained glass window, the medieval painter made his contribution to the glory of God and the Church, developing a form which has never been used with comparable effectiveness since that time.

In the stained glass window of the *Madonna and Child* (Fig.

244) made in the late 12th century for the cathedral at Chalons in France, the technical methods employed can be observed. It consists of innumerable pieces of glass in which the color has been definitely fixed by firing. These are fitted together and



FIG. 244.—MADONNA AND CHILD. STAINED GLASS WINDOW. CHALONS CATHEDRAL.

held in place by strips of lead. In the finished design, the figure is made up of large patches of color, each of which consists of many small pieces held together, the details such as the eyes and nose being painted on the glass after its original firing and then baked on to it in the oven. The effect when the window is in place is one of pure and intense color. Curiously enough, this is the direct result of the black lines of the leading that separate

the colors. Without them, the colors would blend in the eye, and instead of giving the impression of pure blue and red side by side, the effect would be a violet less intense in hue than either of the original colors.

Needless to say, the stained glass maker of the Middle Ages did not strive for naturalism in his figures. Like the medieval sculptor, he was primarily concerned with making his panels in such a way that they would fit the architectural scheme rather than as independent compositions. His ideal was a flat pattern of color and representation as such was always subordinated to this consideration. This was essential not only for the decorative needs of the architecture itself, but also as a part of the moving effect that the whole interior produces, the sense of luminous darkness with its suggestion of infinite space.

Stained glass was not the only form of late medieval painting, for the art of manuscript illumination continued to the very end of the medieval period. In Gothic miniatures, the figures stand against architectural backgrounds, in accordance with the same architectonic conception that controlled medieval sculpture. These backgrounds are themselves framed by wreaths of foliage, particularly in the later examples of the art, which are portrayed very naturalistically. With the break-up of the Gothic synthesis in the 14th and 15th centuries, different conceptions of painting took the place of the miniature and the stained glass window. The easel picture appears and the prestige which this form acquired as treated by the artists of the Low Countries and of Italy remains undiminished down to the present.

CHAPTER XXVI

PAINTING OF THE LATE MIDDLE AGES

A. THE FRANCO-FLEMISH TRADITION

WHEN one is familiar with the transition from the stark and inert sculpture of the Romanesque period to the freer, more naturalistic sculpture of the late Gothic, the parallel development in painting which accompanied it seems natural. The pathetic element in thought and expression introduced by the mysticism of St. Bernard had manifested itself in an emotional dramatization of the Christian legend. Having affirmed the reality of universals, men sought to represent them in objective visual terms by means of symbols and allegory. In trying to understand experience in the light of Christianity, all material things have symbolic meaning, relating them to the hierarchy of established Christian cosmology. Now this method of understanding the world is foreign to the modern way of thinking which has abandoned the systematic theology of the Middle Ages. Instead of finding connections between things by investigating the hidden paths of relationships based upon cause and effect, the medieval mind sought these relations in terms of finality and in accord with established dogma of divinely revealed truth. Thus to the medieval mind everything has meaning and life in terms of God. "When we see all things in God, and refer all things to Him, we read in common matters superior expressions of meaning."

The demand that abstract concepts of love, death, compassion or piety be externalized into tangible symbols and allegory leads directly to naturalism in art. And further it is a manifestation of the decline of faith, since in the earlier medieval period the validity of these abstractions did not demand proof through demonstration but was taken on faith. The historian Huizinga says of the late medieval times, "All life was saturated with religion to such an extent that the people were in constant danger of losing sight of the distinction between things spiritual and things temporal. If, on the one hand, all details of ordinary life may be raised to a sacred level, on the other hand, all that is holy

sinks to the commonplace, by the fact of being blended with everyday life. In the Middle Ages the demarcation of the sphere of religious thought and that of worldly concerns was nearly obliterated."

At the end of the medieval period in 15th century France and Flanders, there was a tremendous passion for the creation of visible things. Gorgeous pageants were contrived, and elaborate costumes; realistic pictures and statues abounded. As if to assure meaning to life, all activities were formalized, love into a fantastic code, honor into a ritual. The idea of the Trinity was reduced to tangible form, to a mere plaything; it was common for people to have statuettes of the Virgin which opened up to reveal the Trinity inside. Jean Fouquet, one of the greatest French artists, even went so far as to represent the Virgin in the form of the King's mistress, fashionably clothed and offering her bared breast to the Christ Child.

Though this symbol-making was a symptom of the decline of faith, it had positive results of great significance to art. At its best it produced the sculptures of Claus Sluter and the paintings of the Van Eycks. At its worst it produced tedious and vulgar literature, ingenious toys and empty rituals. While religion was becoming a travesty and public and private morals a scandal, the means had been found for the beginning of a realistic art. The painting of this period is called *primitize*, since it marks the beginning of realistic art in the northern countries, but it is primitive only in the respect that it is a beginning. It has been termed decadent, for it marks the end of the medieval epoch, but this is to ignore its amazing vigor in the hands of a few masters. Its significance lies in the fact that though the ages of faith were coming to an end, the culture of the north had the vitality to establish firmly a tradition of naturalism which, fused with the Renaissance tradition of Italy, was to create the modern world.

The impulse to seize the image of things, and, by representation, to make them part of the mind that perceived them, came to a focus in the Burgundian court of the Duc de Berry. He surrounded himself in the early years of the 15th century with countless artists, among them the greatest book illuminators of his time, and perhaps of all time. Chief of these is Pol de Limbourg, who with his brothers painted the illustrations for the *Très Riches Heures du Duc de Berry*. This Book of Hours is a collec-

tion of prayers, a calendar, psalms, and lessons for the layman's devotions. In Limbourg's *Book of Hours* are painted vividly realistic landscapes such as the world had never seen. Never before had men recorded so faithfully and vigorously the spectacle of common things. Freed from the highly abstract and traditionalized ecclesiastical subjects and rules, the artist pays abundant homage to the joy of sensual experience. The months are illustrated by scenes of common activity peculiar to the season. In June, men with scythes slash wide paths through the tall grass,



FIG. 245.—POL DE LIMBOURG. FEBRUARY. FROM THE *TRÈS RICHES HEURES DU DUC DE BERRY*. MUSÉE CONDÉ, CHANTILLY.

while two barefoot girls with rake and fork pile the dried grass into small stacks. The windows of the Duke's castle look out upon this view, where in the distance winds the river Seine, with the *Ile de la Cité* and its edifices which may still be seen after more than five hundred years.

With lively interest the painter represents *February* (Fig. 245) by a scene of a farmyard where deep snow covers the ground and the roof of the sheepfold full of huddling sheep. All creatures are cold: the sheep seek the communal warmth of their own wool, the girl blows her frosty hands, the woman and the two little children within the shelter lift their wet garments and warm their bare bodies at the fireside. The artist has missed nothing; he

sees the row of beehives, the crinkly branches of the barren tree, the woodsman, and the peasant plodding through the heavy snow driving a donkey laden with fire wood. For all this great wealth of narrative detail, there is no crowding or confusion. And if there is a slight lack of proper perspective, it is scarcely noticed in the vivid rendering of the details.

Though executed on a scale no larger than the page of this book, these landscapes are among the first truly modern ones in painting. The symbol of active man creating the physical character of the world he dominates by the strength of his hand has been achieved and will be echoed again and again in later art. In earlier illuminations the landscape had been ignored. The figures were placed against a flat gold background. But with Pol de Limbourg that tradition was definitely abandoned in favor of greater naturalism.

The significance of Limbourg's miniature goes beyond its objective contrast with preceding paintings. In the school of book illumination to which it belongs were educated the greatest Flemish masters of the 15th century: Hubert van Eyck (c.1370-1426) and his brother Jan (c.1385-1440). It is reasonably certain that Hubert van Eyck was the painter of miniatures which, for knowledge of the effect of atmosphere upon the appearance of distant objects surpassed even those of Pol de Limbourg. Together the two Van Eyck brothers painted the great Ghent Altarpiece, a frame-work of pictured panels which swing open like doors to reveal the central subject of the altarpiece. Begun by Hubert, it was completed after his death by Jan.

It should be observed that the task of painting a large altarpiece for public display requires a kind of painting somewhat different from the tiny book pictures. The Van Eycks could not simply enlarge the miniatures because tradition prescribed an exacting formula for the painting of the altar pictures. The subject was of prescribed religious character and must be treated with appropriate dignity. The central part of the Ghent Altarpiece is the *Adoration of the Lamb* (Fig. 246). It is apparent that the Van Eycks have departed from the usual manner of the book illuminators. The subject is an illustration from the Apocalypse, "I looked, and Lo, a Lamb stood on Mount Sion." The Lamb, a symbol of Christ's sacrifice and human salvation, stands upon an altar in a deep landscape before the Fountain of Life. Large groups of



FIG. 246.—VAN EYCK, ADORATION OF THE LAMB, FROM THE GHENT ALTAR-PIECE. ST. BAVON, GHENT.

martyrs, prophets, sibyls, judges and knights have come to witness this proof of God's love. One will observe at once the richness of the painting, the great detail in the treatment of garments, individual faces, even the flowers in the grass. But it is evident that the perspective is not arranged so that all things are seen from a single point of view. It is as if Van Eyck had placed together several groups of spectators and was not heedful that they be unified in atmosphere and perspective. This lack of unity results from the difficulty of handling so complex a subject on a large monumental scale, and also from the fact the medieval painter is chiefly interested in his subject matter and less in how the subject is handled with regard to the atmosphere, the landscape and so on. As in the landscapes of Pol de Limbourg, here too the pictures are built up by the addition of thousands of details. Consequently the eye is somewhat bewildered by the profusion of objects all of which are rendered with arresting distinctness in brilliant colors. The Van Eycks had perfected the technique of oil painting and with it produced effects that have never been surpassed for luminous richness. It is the incredibly transparent greens, the lustrous reds and crystal whites which give authenticity and unity to the picture, to compensate for the pinched uncorrelated space effects. To the medieval mind every object in the world takes on a peculiarly mystic significance by the very fact that it is a divine creation. For the artist to record its isolated qualities was to recognize that holy splendor which was its intrinsic virtue. There are about twenty separate panels comprising the altar, some of which are related to adjoining scenes, but the majority are treated in isolation. Later ages were to aim at a logically unified pictorial treatment, but the medieval painter was satisfied with an aggregate of kindred subjects unified symbolically by the enveloping landscape.

Jan van Eyck, the more modern of the brothers, was a great portraitist. With an unprecedented sense of realism, he illuminated the personality by rendering not only the outer appearance of his subject but also the relationship to its surroundings, thus making a profoundly important advance beyond the more purely symbolic manner of the Ghent Altarpiece. In the portrait of *Jan Arnolfini and his Wife* (Fig. 247), all the intimate details of the surrounding room are portrayed. Much as one marvels at his skill in re-



FIG. 247.—JAN VAN EYCK, JAN ARNOLFINI AND HIS WIFE. NATIONAL GALLERY, LONDON.

cording the texture of fur trimming, heavy brocade, the quality of the light shining from the brass chandelier, the very grain of the planked floor, what astonishes most is the way these details are subordinated to the personalities of the two people. In this subordination of the unessentials, Van Eyck proves himself one of the greatest masters. A lesser man working in the same medieval technique would have presented merely a dull and pointless display of chairs, bed, mirror and incidentally the two occupants of the room. As it is, the eye is drawn unerringly to the faces and hands; all else, though sharply delineated, is blended into a background of atmosphere and adjuncts. We observe the rather self-conscious attitude of the pair, the shrewd and possessive Arnolfini and his meek wife. It is not an intimate scene; rather they seem conscious of their friend the painter whose unseen presence is felt as a third in the room. Few paintings are so charged with humanity. Not a little of its vitality is due to the rendering of space. The light which filters through the room seems to set the space vibrating. It strikes the chandelier; it touches a spot on the floor and plays against the wall where it sparkles from the convex mirror. In this mirror we catch a glimpse of the interior from another angle, and so the space is further enriched. The Gothic feeling for intangible pulsing space so powerfully exploited in the cathedrals, is now finding a further expression in painting not only for its own sake but also as an instrument to give significance to isolated objects, as the structure of the cathedral gave meaning to the carved images which adorned it. The landscape with its inexhaustible possibilities of space patterns replaces architecture as a setting for figures, and in pictorial art it became the dream of painters down to our own day to plumb the fathomless mysteries of abstract space.

Among the many artists to follow the Van Eycks was Rogier van der Weyden (1400-1464). About the middle of the 15th century he painted his great *Descent from the Cross* (Fig. 248). While Rogier employed the same technique of minute detail as Jan van Eyck, he did not obtain the same arresting objectivity. More literal than Van Eyck, he seeks to sway by emotion in representing the direct image of grief in his characters. The Italian painter Giotto in his *Pietà* (Fig. 258) expresses emotion through an abstract pattern of forms that makes the emotion implicit in

a composition which becomes thereby a moving and symbolic embodiment of universal grief. Rogier, trained in the tradition of Gothic wood carving, gives only the tangible figures without the enveloping atmosphere and its vibrant space. In this respect he is archaic where Jan van Eyck is modern.

The Northern masters painted only small pictures, since the Gothic style of architecture provided no large wall surfaces like



FIG. 248.—ROGIER VAN DER WEYDEN, DESCENT FROM THE CROSS. ESCORIAL, MADRID.

those found in Italy. It is interesting to observe the result when an Italian patron demanded of Hugo van der Goes (active 1465-82) a large *Nativity* (Fig. 249) broad enough to fill the wall space of a good sized living room. Judged by the standards of Italian painting, it appears lacking in unity and order. We seem to see the Madonna from one distance, the angels from another. The eye is first engaged by the angels and the still life of irises and columbine in a vase. Then by virtue of putting two and two together it is seen that the people, the angels, the shepherds and

the Virgin form an adoring circle about the Holy Child lying naked upon the rude pavement. The picture is in truth a series of brilliant fragments. When the donor Portinari presented it to a Florentine hospital in 1470, it was the despair of all the Italian masters who came flocking to see it, for they had never seen such vivid realism or delicacy in drawing combined with astonishingly brilliant colors. Their Madonnas had not been given such homely



FIG. 249.—HUGO VAN DER GOES, NATIVITY, UFFIZI GALLERY, FLORENCE.

features alight with lyrical tenderness. And never had they seen such uncouth, horny-handed fellows as the shepherds appearing in art; these were genuine peasants that gaped with loutish adoration at the Babe.

Of all the early Flemish masters perhaps Hans Memling is the best loved. He was no investigator or pioneer; coming in the latter half of the 15th century he sums up the achievements of the age. His style is poetic, urbane and sensitive. The portrait of

Barbara Moreel (Fig. 250) is characteristic in its exquisite refinement of pattern and the delicate handling of the silhouette. The tips of the hands in a gesture of prayer give a clue to the sentiment of her face. Memling had a fine sense for the treatment of the unified whole of a picture: a sense equalled only by his gracious interpretation of sentiment and mood. Jan van Eyck subordinated himself to the impersonal order of nature and at-



FIG. 250.—MEMLING. BARBARA MOREEL. MUSEUM, BRUSSELS.

tained thereby a severe grandeur of expression that is lacking in the more intimate and emotional style of Memling. In interpolating subjective lyrical expression he reveals the new impulse toward individualism that also characterizes the art emerging at that time in the humanism of Renaissance Italy.

French art in the 15th century is so closely related to Flemish as to be at times indistinguishable from it. Jean Fouquet (c.1415-82), one of the many gifted Frenchmen of this period, was a prolific illuminator of manuscripts in the Franco-Flemish tradition, and as a portraitist he is even more celebrated. The international trend of his style foreshadows the interaction be-

tween North Europe and Italy, which becomes the rule in the 16th century. More sober and abstract than the Flemings, Fouquet readily absorbed the Italian influences toward formalization and the subordination of details to large effects. The pinched and meagre face of *Charles VII* (Fig. 251), finely modelled, emerges from the flat schematic drapery of the curtain and costume in an unforgettable pattern. He is Charles, *Le Victorieux*, the unhappy weakling whom Joan of Arc made King of France.



FIG. 251.—JEAN FOUQUET. CHARLES VII. LOUVRE, PARIS.

The greatest single monument in French painting of the later 15th century is undoubtedly the *Avignon Pietà* (Fig. 252) painted by an anonymous master or masters. The often repeated theme of the Virgin mourning her dead Son is here treated with sublime pathos. The large figures and monumental effect of their arrangement indicate the influence of the more formal and abstract Italian style. The main figures are characterized by a noble and ascetic restraint in their mute expressions of grief. The very human donor who kneels at the left participates only in so far as he shares the

grief of the sacred persons imaginatively in his devotion. That a layman should be represented so realistically and given great prominence in a sacred picture signifies the growing importance of the Individual in the social and religious thought of the times. In late Gothic sculpture, there is found the same combination of realism exquisitely blended with religious sentiment. The stage of the picture is set in a barren landscape, brown and austere, illuminated only by the burnished gold background against which loom the towers of Jerusalem. The use of this gold background



FIG. 252.—THE AVIGNON PIETÀ. LOUVRE, PARIS.

(for it can scarcely be called a sky) at a time long after it had been displaced by realistic landscape is significant of the sophisticated and eclectic character of the painter, who used every device he knew to express a mood of deep spirituality. It is a product of the various artistic influences then current in France. Though stylistically a *tour de force*, it is withal a creation of transcendent beauty.

In Germany, the Gothic manner continued without modification

by Italian ideas long after the French style had reacted to artistic influences from the southern country. The extent to which this is true can be seen in the *Adoration of the Magi* (Fig. 253) by Stephan Lochner (d. 1451). There is no attempt at suggesting a naturalistic background although it seems impossible that Lochner did not know the work of the Van Eycks and their contributions in this field. It is rather a case of the artist not wishing to



FIG. 253.—STEPHAN LOCHNER. ADORATION OF THE MAGI. CATHEDRAL, COLOGNE.

suggest physical reality but rather to impress upon the observer the immateriality of the figures and their setting. These individuals are "pure intelligences," existing only as minds that have lost their corporeal existence by contemplation of the abstract conception of God. They have even lost the will to act, and move in a relationship to each other that has no dramatic meaning at all in contrast to the pathos of Rogier van der Weyden's figures (Fig. 248) and the sense of psychological reality in those of the Avignon Pietà (Fig. 252). In such a painting as this, we can observe the negative contemplative ideal of personal religious experience that is summed up in the writings of Thomas à Kempis as opposed to

the more positive concepts of Roger Bacon that inform the record of experience that appears in the Ghent Altarpiece.

While the spiritual leadership of the Church was beginning to decline in the northern countries of France, the Netherlands and Germany, there was at the same time a political chaos marked by the disastrous Hundred Years' War in France, the conquest of the Netherlands by Spain, and the division of Germany into its many feudal states. The transition from feudalism to nationalism was characterized by bloody wars and unbelievable violence, laying waste whole kingdoms. The wonder is that, with comparative little stability of cultural traditions, art flourished at all. When it does appear it is confined to local schools, sometimes highly abstract in the German schools, and again surprisingly naturalistic, as for instance in Flanders. The provincial isolation of schools was somewhat relieved by the sporadic movement of painters to and from Italy. With the unification of France and her subsequent invasions of Italy, the international trend became increasingly greater until in the early 16th century Francis I of France, a great patron of the arts, called to Fontainebleau a group of Italian painters, decorators and craftsmen who formed a school of art that was a potent factor in unifying the European tradition. The nature of that fusion will be considered in the discussion of Renaissance art.

B. LATE MEDIEVAL PAINTING IN ITALY

The late Middle Ages produced a great flowering of painting in Italy as they did in the North. The comprehensive Gothic spiritual synthesis of the 12th and 13th centuries manifested in the body of scholastic philosophy, exemplified in the great cathedrals and in the coherence of society under the leadership of the Church, had touched Italy only indirectly. Gothic art in Italy is a borrowed mannerism which she often disdained and only half understood. The Italian distrust of the language and temperament of the north was deep, founded in a knowledge of her own genius and her organic relationship to the classic past. Italy, though cut off to a large extent from direct knowledge of the pictorial art of Greece and Rome, still held the clue to antique forms of expression in Byzantine art. In Byzantine mosaics, manuscripts and carvings, the classic language had been compressed and almost stultified by dry formalism, but it had not been destroyed.

I. PAINTING IN SIENA

From the 13th century through the Renaissance, the development of Italian art centers in Siena, Florence and Venice. Siena was the most isolated and the most thoroughly medieval; her art at the close of the 13th century and the beginning of the 14th held close to the Romanesque-Byzantine tradition of abstraction, with just enough naturalism to be consistent with effective narration of Biblical tales and the expression of delicate sentiment. A city characterized by mystic religious fervor and dedicated to the cult of the Virgin with its lofty sentiment, she was no pioneer in art or science, a rôle which belonged to her neighbor Florence.

Duccio, active around 1300, felt no need to expand the boundaries of his art much beyond the scope established by tradition. In 1311 he completed his masterpiece, a large altarpainting of the Madonna in Majesty. Flanked by monotonous rows of haloed angels, martyrs and evangelists, the Virgin sits, holding the Child Jesus. It is essentially Byzantine in character; there is no space represented and the figures have little bulk. The forms fill the surface to the point of crowding. It differs from the older pictures in its breadth and sweetness. The Mother, who holds the Child (no longer represented as a little old man), is sober and gracious, unlike the harsh and dour Madonnas of the old paintings. Sweetness and humility are the positive qualities which make Duccio such an effective interpreter of the religious sentiment of Siena. On the reverse of this altarpiece are forty small narrative panels of scenes from the Bible and the early Christian legends. Abstract symbols are no longer sufficient; in these panels fresh interpretations are found, dramatic and narrative. The Christian epic must not only be recited, but it must be vivified with sympathetic images that appeal to the hearts of the beholders. One of the forty episodes is the *Christ Praying in the Garden of Gethsemane* (Fig. 254), when He asks that the cup may pass from Him. Gethsemane is a barren hill-slope dotted with miniature trees. Christ addresses the saddened and attentive disciples who have accompanied Him; then while they rest He prays for the strength that the morrow will demand, stretching forth His hand to receive a chalice, the symbol of His destiny, from an angel. The sky is still a flat gold relief after the Byzantine manner, and the landscape only sufficient to contain the figures and give them a general location. The

figures are highly generalized and yet characteristic in their attitudes. Typical is the sharp gold band that forms the edges of Christ's robe and makes a lively linear pattern serving to set off the dominant person in the tableau. The decorative calligraphy of garment folds and contours are characteristic of the Sienese style.

Duccio is the greatest master of the Sienese school, but he is followed by other superb artists; notably the brothers Ambrogio and Pietro Lorenzetti, and Simone Martini. The *Madonna and Child* (Fig. 255) of Pietro Lorenzetti (active 1320-40) is typical



FIG. 254.—DUCCIO, CHRIST IN THE GARDEN, DETAIL OF THE MAESTÀ. OPERA DEL DUOMO, SIENA.

of the tact and aristocratic delicacy of the school. Intensification, refinement of sentiment, replace the hierarchic symbolism of the Byzantine. The tenderness with which the Virgin adores her Child, the pathos of the Crucifixion, the mystic rapture of the martyr: these are spiritualized emotions and the means by which Siena interpreted the mysteries of life.

But in addition to art other new voices are heard in medieval Italy, voices that are symptoms of a revived life, and which will have the most significant bearing upon the temper of the modern world. In a small hill town near Siena, St. Francis of Assisi was establishing his brotherhood to be organized later as the order of Franciscan monks. This little monk preaching the brotherhood of man, with sympathies embracing faith in all nature, even in

animals, trees and flowers, so vitalized and dramatized the dry scholastic doctrines of the Church that he crystallized, as no other man had, the thought and feeling of the late Middle Ages, and many go so far as to see in him the origins of the Renaissance itself. St. Francis is the embodiment of passionate Christian love in practice. Teaching a way of life through the denial of property and an affirmation of the kinship of all earthly things, he asserted a pantheistic harmony of life. Through a love which is focussed on this world as St. Bernard's love of God was not, he denied the primitive Christian dualism which separates body from soul.



FIG. 255.—PIETRO LORENZETTI. MADONNA AND CHILD WITH SAINTS. LOWER CHURCH, S. FRANCESCO, ASSISI.

His love of birds and beasts, of men and fire, was for him the unifying and humanizing force in the world. The thought of St. Francis swayed the minds of the poet Dante and the painter Giotto, the two greatest artists of medieval Italy. The vitality of the experience he revealed compelled these masters to explore their own hearts and the world about them, and in so doing to produce a world of images which would be models for centuries to come.

2. PAINTING IN FLORENCE AND CENTRAL ITALY

Siena was absorbed in her exquisite dream, and played but a minor rôle in the development of the art which transformed the face of medieval culture. She understood the sentiment which moved St. Francis to obedience, poverty and humility, but the

Florentine mind as exemplified in Dante and Giotto was the most effective vehicle of Franciscan mysticism. Giotto, essentially more worldly and intellectual in his outlook, accepted the thought of St. Francis and tested its authenticity in a more rational exposition of ordered and understood naturalism.

When Giotto (1266-1336) painted a great image of the *Madonna* (Fig. 256), he did not show her amid an army of saints and martyrs as Duccio and other Sienese had done, as if to give visual proof of her divinity. Rather, he approached the idea from a new direction, seeking to dramatize the compassionate spirit of the Virgin, to make her moral qualities felt and understood by all who viewed his picture, and thereby to command their worship. To evoke in men's minds the reality of these qualities it was necessary to create images which in themselves were persuasively real. Here, then is the problem: to translate the abstract ideas

of the Middle Ages into readily understandable images of people and situations. The great intellectual refinement to which scholasticism had submitted the concepts of life had placed the essentials of Christian thought beyond the grasp of the mass of humanity. Formulas, fixed codes and systems had been imposed upon the simple faith of the people and made them spiritually destitute. Christian doctrine is largely a humanization and dramatization of



FIG. 256. GIOTTO, MADONNA AND CHILD ENTHRONED. UFFIZI GALLERY, FLORENCE.

the abstract ethical and metaphysical ideas of antiquity. Now had come a time when Christianity itself must undergo the same process of revivification. Simultaneously the process was occurring in the north and in Italy, in each case according to the innate differences of temperament and cultural background.

Giotto makes his images of angels, Mother and Child palpable and real by working out a scheme of light and shadow. He ar-

ranges the figures so that space is provided for each tangible form. The sides of the Gothic throne are shown in foreshortening; heads of prophets are seen through the frame. The steps that lead to the throne illusionistically project into space. It is amazing to see how radically Giotto departs from the Byzantine tradition of his teacher Cimabue (ca. 1240-1302), who, content with the old forms, had represented the *Virgin Enthroned* (Fig. 257) as an object of adoration without any attempt to interpret what the Madonna means in terms of human mercy, love and compassion. He felt no need to create an illusion or to prove, since the faith in his symbol was unquestioned. Giotto felt the potential emptiness of such symbol painting—anyone who has seen the dreary monotony of the traditional paintings of this period knows with what



FIG. 257.—CIMABUE. MADONNA AND CHILD ENTHRONED. UFFIZI GALLERY, FLORENCE.

dry rot they were infected. Cimabue could however inform his paintings with fervor and express in powerful linear patterns something of the passion that is felt in the Romanesque sculptures in the north, notably the Prophet from Souillac (Fig. 188). But his art is spatially flat and static. Observe the absence of any life-giving gesture or expression: the faces are almost exactly alike;

the angels stare out directly at the beholder. In Giotto's picture there is a wide variety of types among the angels in regard to gesture and feature. The congregation of angels direct their attention toward the Mother and Babe as though they, like the spectators, were devotees. This device serves to augment the illusion of spaciousness and to heighten vastly the dramatic effect. While the traditional Byzantine masters present us with static universal concepts, Giotto does the opposite. He defines the time, the place



FIG. 258.—GIOTTO. LAMENTATION. ARENA CHAPEL, PADUA.

and the circumstance, and thereby permits us to identify ourselves more completely with the figures he represents. It is this feeling of sympathetic identification that gives such overwhelming intensity to his painting of the *Lamentation* (Fig. 258), one of the most affecting images of Love and Death ever painted. The forms move in a slow measured symphony of grief; they are borne down by the appalling spectacle of the dead Saviour. Powerful as is this sense of death, the tragic reverberation of love among the mourners strikes a stronger note. Each responds ac-

according to his nature: the women with wailing and despair, the older men with quiet resignation. The face of the Virgin (Fig. 259) is distorted by excruciating anguish as she bends low over the still body of her Son.

The awful intensity of the tragic drama results largely from the plan of organization. The lower half of the space is packed with figures, yet there is no crowding nor inclusion of irrelevant detail, only the barest necessities of the drama. The mourners



FIG. 259.—GIOTTO. DETAIL OF THE LAMENTATION. ARENA CHAPEL. PADUA.

form two rectangular main groups which are linked by the figure of Christ and by the barren ledge of rock that slopes from the right. The body, about which the figures are gathered, forms a unit with the seated women which links the groups left and right. One might well say that these groupings conform to the emotional and psychological attitudes of the people involved. They are units of a perfectly organized plan that gives optical clarity to the composition and articulation to the dramatic content. Christ is not only the psychological motivation for the action, drawing all eyes to Himself, but the plastic core of the formal organization as well. Even the landscape bends to this universal grief. It consists

of a narrow ledge of rock which terminates at the head of Christ, and serves to unify the group and direct attention to Him. Through the large design with which the action is logically and dramatically articulated, the story attains an expression of the deepest tragic pathos befitting the language of the Scriptures. These bulky figures, these gestures and movements have meaning only in so far as they are consciously organized and directed toward a definite end. The Gothic painters in the North became far greater masters of nature than Giotto, but they lacked his sense of the underlying



FIG. 260.—GIOTTO. DEATH OF SAINT FRANCIS. BARDI CHAPEL. SANTA CROCE, FLORENCE.

rhythm of the emotion and his sense for the unity of the theme as a whole. We miss in them the human understanding that gives his figures intrinsic rather than symbolic value.

The impression which St. Francis made upon his world is reflected in Giotto's frequent painting of the St. Francis theme. He or his pupils portray the little monk feeding the birds, or receiving in his own hands and side the wounds suffered by Christ. One of the greatest of these paintings is a fresco depicting the *Death of St. Francis* (Fig. 260), which rivals the earlier *Lamentation* in dramatic intensity. The stage is more ample, the design more structurally lawful and imposing. The architectural setting lends itself to a severer and more powerful schematic arrangement. The two sides are marked by small gables which en-

frame the solemn groups. The love by which the Saint lived now seems to pervade his brothers whom he is leaving. The prevalent mood of restrained grief is interrupted and at the same time intensified by a single gesture of the monk beside the head of the Saint. He alone sees the vision of his master's soul being borne to heaven. It is impossible to conceive of a more perfect realization of such a theme.

To an eye familiar with the easy graces and striking illusionism of naturalistic painting, these frescoes will appear flat and rigid. Coming as they did at the very beginning of naturalism, Giotto's means of expression were limited. There are no abundant landscapes in his murals, no minute analyses of the superficial appearance of things of the type that the northern masters produced with such facility. For it must be recognized that Giotto grew out of a tradition of abstraction in which the mere appearance of things was of relatively minor importance. He was the first to employ the realistically comprehended human drama for his subject. Yet his eye was so keen to see the essential characteristic forms of things, his mind so alert to eliminate all trivialities and to arrange his themes in inevitable patterns that one never asks for more convincing renderings of the real world. If the Italian artist did not represent the sensuous world with the eager realism of the miniature painters in France and Flanders, it is because he was aware of his individualistic nature and his need for a humane rather than a materialistic idealism. In Italy the ideals of classic art had never entirely been obscured. They were felt by Niccolò Pisano, whose closely packed carved panels (Fig. 108) are related in many respects to Giotto's frescoes. By emphasizing concrete form, the Italian sculptor and painter give intrinsic significance to their images, a significance attained in the north by their inclusion within the frame of architecture and landscape. Intelligence and passion are the twin impulses which together shape the monumental art of the Italians, qualities which are sharply in contrast with Gothic instinct and faith. The former produced an integrated pattern of the moral world, the latter brilliant but isolated symbols of the world's beauty. The art of the north and of Italy were destined to fuse, but only when Europe had become a culturally integrated continent.

CHAPTER XXVII

RENAISSANCE PAINTING IN ITALY

A. THE EARLY RENAISSANCE

SO EXALTED were the heights to which Giotto had raised painting almost alone that it is not surprising to find that his influence completely dominated Italian painting for a whole century. His pupils and disciples repeated again and again the new words and phrases he had given them. They embroidered his themes with small essays in realism and perilously complicated his space patterns, until it seems that they lost sight of his thunderous message in exploiting his novelties. Then in Florence about the beginning of the 15th century there commenced an extensive activity of artists of the first rank, which continued through two centuries, the 15th and 16th, in the period known as the Renaissance.

So closely is the painting of Giotto related to the art that flourished in the Renaissance that he is more often than not regarded as the first of the Renaissance masters, just as Jan van Eyck too is sometimes spoken of as an early Renaissance master. Disputes over names and boundaries do not concern us here; suffice it to say that both masters merit the distinction of having established the language of naturalism in painting; without them the subsequent Renaissance development is unthinkable. The first and greatest painter of the century is Masaccio (1401-28), a Florentine whose influence upon the development of the early Renaissance is equalled only by that of Donatello. Before he died in his twenty-seventh year he had opened up vistas that later painters did not exhaust for more than a century. Taking up the art of painting where Giotto had left off more than a hundred years before, Masaccio modernized it, by giving it a new tempo, a new actuality. He was concerned with essentially the same problems as Giotto—the direct relating of experience in terms of action and emotion expressed in tangible human forms moving in a real world.

In the Church of the Carmine in Florence he painted his chief works in fresco, the first flower of Renaissance painting. In

the *Expulsion from Paradise* (Fig. 261) the two guilty ones are driven through the gates by an angel with a flaming sword, Adam



FIG. 261.—MASACCIO. EXPULSION FROM PARADISE. BRANCACCI CHAPEL, CHURCH OF THE CARMINE, FLORENCE.

crushed by his sense of guilt and humility, Eve raising her voice in wailing complaint. With heavy, halting tread they move as one into the unknown. No one, not even Giotto, had ever painted the nude before with such understanding of the essential structure of the body and its movement. Masaccio's figures are eminently real, but not in the sense of being direct transcriptions from nature. They are convincingly real in the sense that they are solidly constructed, move with the coordinated rhythms of the human body and blend with the surrounding light and atmosphere. Jan van Eyck in Flanders about the same time painted his Adam and Eve for the Ghent Altarpiece of which the Adoration of the Lamb was the central panel. Van Eyck amazes us by his realism; we seem to be in the presence of a stodgy Flemish couple that have taken off their clothes in a bright light. The effect is startling and arresting, but little else. The painting has not been dramatically unified by sustained movement or" emotion ex-

pressed by the characters. Symbolically Eve holds an apple in her hand, but even that motif is not sufficient to identify her fully, so

Van Eyck places the names Adam and Eve above the figures. With Masaccio no such obvious labelling is necessary, so directly and unambiguously do their actions reveal their identity and the import of their behavior.

Close by the Expulsion scene is found Masaccio's greatest single composition, the *Tribute Money* (Fig. 262). The Roman tax gatherer in a short tunic thrusts out his hand, demanding tribute for Cæsar. The poor disciples turn in their dilemma to Christ, who directs Peter to go to the river's edge. At the extreme left Peter finds the money in the mouth of a fish, and at the right he gravely tenders it to the collector. One marvels at the simple ease with which the complex action is narrated. In contrast with Giotto's art, Masaccio reveals a new freedom. His men seem to stand upon their own feet, to move about freely of their own volition. With Giotto it appears that men are arranged and placed, acting less in accord with their impulses than in response to some external compulsion. Technically, painting by 1426 had advanced far along the path to a rationally understood naturalism. For the first time the action takes place in a deep landscape. The figures, hills, trees, architecture, are bathed in atmosphere. Aerial perspective (the effect of atmosphere as blurring distant objects) is now understood as well as linear perspective, the conducting of the eye into space through converging lines as shown here in the foreshortening of the architecture. In such ways Masaccio creates the effect of space and bulk, and through the rounding of figures by alternating areas of light and shadow blended together so that they reveal the structure and mass of the draperies. The disciples radiate in a circle about Christ to produce a strong space pattern. For all of these innovations, the artist retains Giotto's monumental effects, his gravity and his coherence. All of the Florentine artists, among them Leonardo, Michelangelo and Raphael will flock in the next century to this little chapel to learn from Masaccio how to gain dignity and simplicity for their own paintings and sculptures.

The masters who placed great emphasis upon large effects through the subordination of small details and who composed broad designs of fine amplitude and dignity in the manner of Giotto—these men may be called monumentalists. In this company, Masaccio is paramount in 15th century Italy. With him belong Castagno, Piero della Francesca, Perugino and Mantegna. Close in time and in spirit to Masaccio is Castagno (1423-57). While Donatello



FIG. 102.—MASACCIO: THE TRIBUTE MONEY. BRANCACCI CHAPEL, CHURCH OF THE CARMINE, FLORENCE.

was shaping in marble, clay and bronze his monumental conceptions, Masaccio and Castagno were discovering how to create on a flat wall the illusion of figures comparable to his in sculptural effect. The crisp definite forms that appear in Castagno's *Crucifixion* (Fig. 263) indicate that this painter has come under the spell of Donatello's art. Against a dark murky sky, the desolate symbol of salvation is silhouetted. Symmetrically balanced on either side are two massive figures who stoically share the agony of the

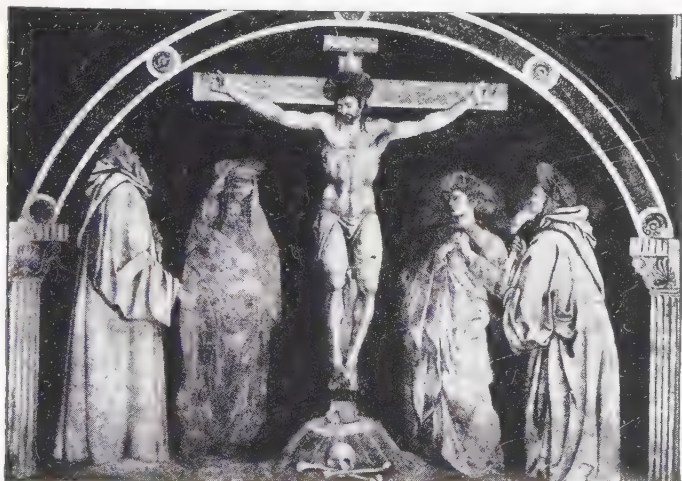


FIG. 263.—CASTAGNO. CRUCIFIXION. UFFIZI GALLERY, FLORENCE.

Saviour. The Virgin and the accompanying saints are like solitary pillars, mute and weighted with emotion. The Christ is nude except for a loin cloth. His death has not the pathos of defeat; rather he is a physical and spiritual giant who consciously and heroically plays his tragic part.

Coming somewhat later in the century, and further extending the scope of the painter to exploit landscape and portraiture, is Piero della Francesca (1420-92). In his *Madonna of Mercy* (Fig. 264) he revived a medieval motif, that of the Blessed Virgin symbolically stretching forth her mantle with a sheltering gesture. It is the medieval idea of the Virgin as a holy woman of the people who acts as a compassionate mediator between humble folk and the

Godhead. But wholly modern is the means with which Piero expounds his idea. A deep space is created by the circle of the trustful kneeling men and women. The light plays in rich *chiaroscuro* upon the garment folds. Instinctively the eye is drawn with those of the kneelers toward the compassionate face of the Virgin, a face that recalls the inscrutable tenderness of some early Gothic sculp-



FIG. 264.—PIERO DELLA FRANCESCA. MADONNA OF MERCY. BORGO SAN SEPOLCRO.

tures. Framed by the crown, the elliptical form of the halo and the neck line of the mantle, its expression is above all one of infinite harmony and tranquillity. The last decades of the century were to find this exalted vision of the great Mother too often diluted with ingratiating affection and worldly vanity. Medieval in his reverence and intensity, Piero recalls the best religious art of the Middle Ages, but the realistic means he uses belong peculiarly to the Renaissance.

While Florence was the outstanding leader in the 15th century, other cities were alert to feel her quickening impulse. Giotto had painted some of his greatest frescoes in Padua near Venice, and the sculptor Donatello had created his *Gattamelata* for the city. In this Padua, the seat of a university already old, Mantegna (1431-1506) studied the arts of antiquity from a master who



FIG. 265.—MANTEGNA. BAPTISM OF HERMOGENES. FRATERNITY CHAPEL, PADUA.

had visited Greece—a rare adventure in those days. Mantegna was enraptured by the sculpture of Greece and Rome, and tried to render in painting the same crisp definiteness of form that he had found in the Roman carvings. In his early work, such as the *Baptism of Hermogenes* (Fig. 265), he avoided all blurring of edges and any influence of atmosphere that might obscure the diamond-like definition of modelling and contour. At first glance his picture appears too full of eye-distracting details in contrast

to those Florentine works we have already examined. The multiple forms of the architecture are painted with exactness. Incidental sculpture appears in the spandrel of the end wall; the pavement blocks are carefully defined, the garment folds are scrupulously enumerated. But the very regularity of the architectural forms is an effective foil for the action of the episode. Against that rigid background the action takes on fresh vitality; Leonardo and Raphael will both make use of this observation. The episode relates the conversion and baptism of the pagan Hermogenes. Before him lie the heretical books he is resigning. The gaunt St. James leans forward to administer the sacrament while various people look on, among them two children. The elder leans easily against a pier, and places a restraining hand on the shoulder of his small brother, lest he interfere with the ceremony. In such unobtrusive observations Mantegna unifies and intensifies the dramatic element. Not only does he produce large monumental effects in the design as a whole, but each face, each detail of still-life is a creation of crystal clear beauty. There is no more penetrating intellect nor surer hand than Mantegna's in 15th century Italian painting. His landscapes, religious themes, portraits and decorative paintings are works of the most amazing splendor. He was one of the first and the greatest of the Italian engravers. His prints circulated freely throughout Italy; in Germany the great Dürer made literal copies of them. Nor was his influence confined to his engravings, for he married the daughter of the old Venetian painter Jacopo Bellini, and was the brother-in-law of Gentile and Giovanni Bellini. As a teacher and friend of these Venetian masters he was instrumental in forming their artistic personalities.

Toward the end of the 15th century, a painter from the hill town of Perugia, called Perugino (1446-1524) introduces a new note in his pictures. So closely knit are his designs, so perfectly balanced and harmonious, that he comes near to the classic Renaissance style of Raphael and Leonardo in the 16th century. In a *Crucifixion* (Fig. 266), composed in three equal parts placed in a symmetrically balanced architectural frame, he arranges the action against a deep landscape. The panels are structurally related, with two figures in each. At the extreme ends appear kneeling saints with another standing next them in such a way that the whole composition is given a pyramidal form with the top

of the cross at the apex. In this arrangement, the moulding of the architecture supplies an important accent in the design. The single figure of the Magdalene to the right of the cross is compensated for by the three slender trees in the left panel, together with the more dominant accent of the hills in the distance. The rhythmic treatment of the space, and the figures so justly and harmoniously placed, gives to the scene a somber atmosphere of gentle brooding. The charged intensity so typical of the works of Castagno and Giotto is relaxed, the suffering of the Lord occasions only a tranquil mood of thoughtfulness and quiet contempla-

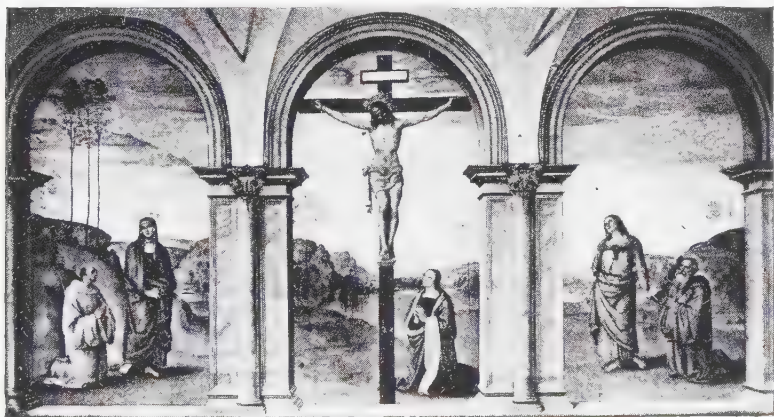


FIG. 266.—PERUGINO. CRUCIFIXION. S. MARIA MADDALENA DE' PAZZI, FLORENCE.

tion. As the Middle Ages recede, the artist is more inclined to reflect the attitude that the Crucifixion is a symbolic idea rather than an emotion-arousing actuality. Emotionalism is subordinated to form-giving intellect as far as the religious theme is concerned. In Perugino there is perhaps too much mind and too little heart for him to treat the Christian epic with complete conviction. It has been argued with cogency that Perugino substituted the emotional values of space in landscape for the religious experience. Certainly the tranquil beauties of his native Umbrian hills haunt his paintings. His tradition of landscape painting was continued by his celebrated pupil, Raphael.

It would be a mistake to suppose that the 15th century as a

whole followed closely the pattern set by the monumentalists. Medieval attitudes of thought and expression still suffused the whole Renaissance. Many painters were almost untouched by the



FIG. 267.—GENTILE DA FABRIANO. ADORATION OF THE MAGI. UFFIZI GALLERY, FLORENCE.

imposing synthesis erected by Masaccio and other monumentalists. Gentile da Fabriano (c. 1360-1428) for example seems to belong to another world—to the age that produced the exquisite book illuminations of the north. His *Adoration of the Magi* (Fig. 267) shows how profoundly his imagination had been fired by the

Gothic artists and at the same time ennobled by Sienese piety. The Gothic frame of delicate carving encloses a panel crowded with kings, pilgrims, servants, birds and dogs, and the whole retinue of the Wise Men. A thousand small details claim attention. Tucked into a corner, the Virgin unobtrusively receives the homage of the magnificently arrayed kings. Heedless of any need for logical spacing and rational motivation for the action, the painter tumbles a wealth of detail before our eyes, and endeavours to make evident the splendor of the homage that the Christ Child commands. It is like an endless medieval romance in which an inexhaustible enumeration of episodes takes the place of a carefully constructed plot. Gothic painting has its parallel in medieval romances and in Gothic architecture of the flamboyant period. The more modern painting of Masaccio finds its equivalent in the sculpture of Donatello and in the architecture of Brunellesco.

Of all the medievalists surviving in 15th century Italy, none was so gentle and spiritual as Fra Angelico (1387-1447), nor was any so able to transpose his religious mysticism on to panel or wall. More modern than Gentile da Fabriano, this Dominican monk simplifies and clarifies his compositions leaving no over-richness. Naturally and effortlessly he seems ever to have come directly to the means of revealing his thought. The *Lamentation* (Fig. 268) cannot be analyzed as exactly as can a composition of Giotto or Perugino. There is no apparent well-planned system of grouping. The extended wall of Jerusalem in the distance sets off the group of mourners filling the foreground. The hushed mood of contemplation finds its counterpart in the landscape stretching forth in wonderfully luminous green and gold of a late afternoon. The saints absorbed in meditation seem filled with a rapture that is in harmony with the luminous landscape which envelops them. Unlike the monumentalists, Fra Angelico did not construct sturdy substantial figures. They tend to flatness; their garments are treated rhythmically in flowing lines that do not emphasize the bodily structure. At a time when haloes were falling into disuse, Fra Angelico made full use of these gleaming symbols and they properly belong to his reverent visions. In style and expression he is often very close to the early Sienese masters.

For all his gentleness and sweetness, he is never soft or sentimental. His paintings are informed with passion and strength. Perhaps he may be considered the last of the medievalists, but this

view of him must be conditioned by the fact that he was keenly aware of the reforming development in the arts, and a close student of the architect Michelozzo, whose structures are reflected in his paintings for a period of ten years. In some of the frescoes in his own monastery of San Marco, where he decorated each cell with a sacred picture, he shows himself a thorough master of monumental decoration. And in his last years at Rome he painted episodes from the life of St. Stephen in the realistic modern style.



FIG. 268.—FRA ANGELICO. LAMENTATION. S. MARCO, FLORENCE.

But these later frescos are not his best work; his genius was for the more lyrical religious sentiment.

The synthesis taking place in the early Renaissance was a very complex process. The revolution in thought, based upon the rational interpretation of experience as opposed to the intuitional mysticism of the Middle Ages, involved a wholly new way of approaching reality. It implies a systematic investigation of the world as we know it through our senses, and a correlation of the sense impression with the organized knowledge of science. The artist could not escape this revolution. The medievalist might dispense with any profound analysis of the physical appearance of the external world. Relying upon bright decorative colors and upon a lively

sense of design, he could express his piety without recourse to analysis of the visual world. When Fra Angelico painted the kneeling Virgin receiving the Annunciation, he needed to paint only a credible symbol of the act of kneeling, the simple identity of the gesture being all-sufficient. A more modern naturalistic master would ask himself how the body appears and what exact physical arrangement of legs and torso was involved in the simple act of balancing the body upon the knees. To him that aspect is important because he does not separate mind from body. The physical phenomenon has its two coexistent and inseparable aspects, the act and the will. The artist fails to express the reality of the experience unless he reveals this dual truth without ambiguity. This attitude is implicit in the naturalism of the early Renaissance.

The Renaissance study of Nature was motivated by a desire to understand (and hence to control) it, and to shape life in accordance with its laws. For the modern man this is the great meaning that naturalism holds. For a thousand years, nature had been subordinated to the view that truth had been revealed once and for all in the body of ecclesiastical literature. In the Renaissance, man woke from his long dogmatic slumber to explore the nature of the physical and spiritual realities, to discover himself and to accept the perilous way of a life based upon self knowledge and science. We speak of the Renaissance as the modern world because we today are still interpreting the world in terms first defined by 15th century Italy.

The mastery of the physical world in realistic images was a long and difficult process. It was more than a process of learning to *draw* and *compose* realistically. The images had to be reshaped and reorganized in relation to the inner experience of the artist. To the creative artist there is no such thing as "correct" drawing; it is only correct when the picture becomes the means of externalizing some real experience. That means of externalizing was made possible in the 15th century through composition based upon nature. From the technical aspect, much had to be learned: how to render objects in motion, how to represent distance through the proper diminution of objects in perspective, how to create the illusion of depth on a flat surface through linear and aerial perspective. The interaction of atmosphere and local colors, the blending of colors in the light and air, were also problems of the first

magnitude. Piero della Francesca wrote several books on scientific perspective, and Uccello spent his life investigating the mysteries of perspective drawing. Pollaiuolo was especially concerned with the rendering of the nude. Uccello (1397-1475) probing the abstract principles of perspective, undertook to represent the complex subjects of a series of battle pictures. In the *Battle of Cavalry* (Fig. 269) he tried to capture the spectacle of charging fighters in violent movement against a deep landscape. A few clashing riders stand out in the foreground, while a grand array of many



FIG. 269.—UCCELLO. BATTLE OF CAVALRY. UFFIZI GALLERY, FLORENCE.

knights is suggested by the half-concealed details. The hedges of the fields converge in an apex at the top of the picture. It is a rich pageant of gorgeous knights and chargers, shining armor and weapons, but anyone can see that the artist has not been altogether successful in subordinating the details to the main action. While the dogs and rabbits in the field, the oranges in the trees and the details of the trappings are marvellously interesting, still they do not contribute materially to the central idea of the battle as such. Uccello had never seen pictures of horses in motion or fallen upon the ground; his attempts to paint them realistically are somewhat amusing: those fallen in the foreground look like horses stuffed with sawdust that have tipped over at various angles on his studio floor. The one kicking his heels in the air is a figment

of purest imagination, for no horse ever looked like that. Despite these more or less mechanical shortcomings, and the diffuse dramatic treatment, the composition is a triumph of lively imagination and invention, and one of the finest wall decorations produced during the entire century.

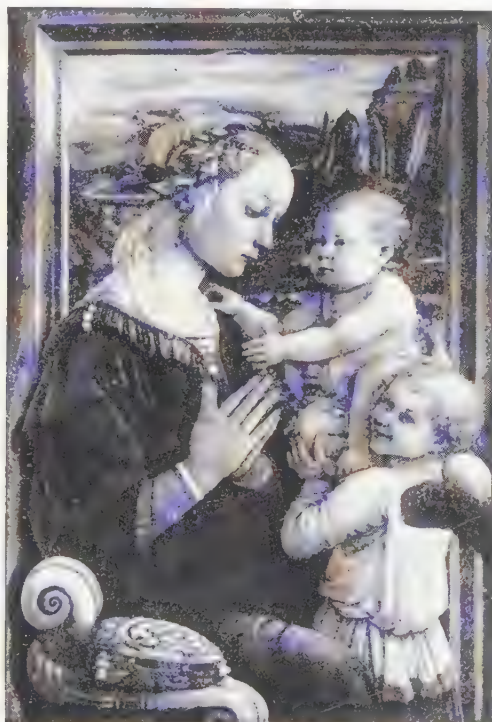


FIG. 270.—FRA FILIPPO LIPPI. MADONNA AND CHILD. UFFIZI GALLERY, FLORENCE.

The development of naturalism was accompanied by a certain loosening up, a relaxation from the sublime austerity of Masaccio and Castagno. Artists were quick to use naturalism to express personal feelings as individualism becomes more and more pronounced. The appearance of Fra Filippo Lippi (1406-69) gave tremendous impetus to the popularity of the resultant charming and informal style. (A robust, worldly man, he eloped with a nun he

had met while working in a convent, and after they succeeded in having their monastic vows rescinded, he married her). Filippo's saints are not generalized types, but familiar middle-class Florentines and of this world in every respect. There is little reverence in his *Madonna and Child* (Fig. 270). The Virgin is a portrait of his pretty wife, who posed repeatedly for his paintings. She wears the clothes of the times, and her hair is modishly arranged. The curly-haired Bambino does not even make the gesture of blessing: indeed, it would scarcely be in keeping for him to do so. The angel who supports the Holy Child tilts his saucy head as if con-



FIG. 271—FILIPPINO LIPPI, MADONNA APPEARING TO SAINT BERNARD. BADIA, FLORENCE.

scious of the spectators. Filippo Lippi sounds a new note of informality and joyousness that is typical of the second half of the century. His son Filippino Lippi (1457-1504)—the little Filippo—expanded his father's style, later in the century, by refining and sentimentalizing it. In *The Virgin Appearing to St. Bernard* (Fig. 271) there are no robust hearty children. The angels that accompany the Virgin are delicate and beautiful and well behaved. The Madonna is fragile and spiritual; she invokes in the saint a pensive reverent mood.

It is an art that has passed the time of exuberant naturalism and foreshadows the new synthesis of the 16th century.

The newly attained mastery of nature led to an indiscriminate profusion of image-making in sculpture and painting. Painters turned to representing all aspects of the visual world. Sacred themes were lavishly embellished with worldly portraits which often eclipsed the avowed religious purpose of the panel or mural. The Virgin is represented as a proud Florentine lady or even as a specific portrait of some well-known matron. When Benozzo Gozzoli (1420-97), a one-time pupil of Fra Angelico, represented the *Journey of the Magi* (Fig. 272), he made it the occasion for painting the pictures of the ruling family of Florence, the Medici. Hundreds of clearly delineated figures appear, winding into a

conventionalized landscape. Trees, castles, birds, game, pepper the mountainside. In its profusion his mural recalls certain medieval pictures rather than the sublime frescos of Masaccio. Exhaustive description of scenes without great concern as to their origin became a passion.

† In Venice, Gentile Bellini (1426-1507) understood the complex problems of landscape much better, as can be seen in an episode



FIG. 272.—GOZZOLI. JOURNEY OF THE MAGI. DETAIL, MEDICI-RICCARDI PALACE, FLORENCE.

in a series called the *Miracle of the True Cross* (Fig. 273). A monk has miraculously recovered a relic that had fallen in the canal. Hosts of spectators line the banks and the bridge to witness the miracle. The clarity of each detail recalls the precision of the Van Eycks. It is amazing with what definite character Gentile has painted every chimney pot and every stone in the bridge without losing sight of the scene as a whole. The countless throng is reduced to a continuous band stretching across the picture, defining the square space in which the principle action takes place.

He knew how to construct blocks of houses foreshortened according to scientific laws. This mastery of the mechanics of representation, together with a treatment of light that clarifies and orders the details, enabled him to employ the panoramic method effectively.

In Florence the prolific muralist Domenico Ghirlandaio (1449-97) lavished his vigorous talents on a series of religious pictures representing ostensibly the episodes of the New Testament, but



FIG. 273—GENTILE BELLINI. MIRACLE OF THE TRUE CROSS. ACADEMY, VENICE.

in reality illustrating with gossipy elaboration the life and manners of his own 15th century Florence. In one, Mary and Elizabeth are strikingly realistic portraits of prominent women; they meet and embrace in a familiar spot overlooking the Arno River above which tower the Palazzo Vecchio and church steeples that can be seen to this day. His familiarity with the lively Flemish realism of Hugo van der Goes' altar piece (Fig. 249) had given impetus to his natural predilection for copious illustration. The current flair for enumeration of casual detail may be seen in his *Last Supper* (Fig. 274). The theme itself does not inspire any unusual design. Taking the traditional plan of a long table with the disciples and Christ on one side and Judas the betrayer isolated

on the other, he merely enriches the composition with a wide variety of realistic details. While he has a good deal to say about the trivialities, the cat on the floor, vases of flowers on the wall, the garden outside the monastery with birds sweeping through the air, yet the treatment of the story is rather dull and pedestrian. The disciples sit gloomily like guests at a boring banquet, apparently unaware of the fateful words of the Saviour.

Where Ghirlandaio is phlegmatic, deliberative and a little dull, Luca Signorelli (1441-1523) is the very opposite. Not content with



FIG. 274.—GHIRLANDAIO. LAST SUPPER. S. MARCO, FLORENCE.

the superficial appearance of things, he set himself the task of investigating their underlying physical construction the better to represent all their qualities of bulk and texture. His special study was the nude. Through secret and patient dissection of cadavers, he studied the structure of the bones, how the muscles interacted with them through tendons and ligaments; for he knew that only through accurate knowledge could he acquire the skill to render the organic movement of the body convincingly. As no painter before him he correlated emotion with physical action. The profundity of his vision and the fire with which he informs it appear in the *Torments of the Damned* (Fig. 275), where the writhing of men suffering intense agony is realistically portrayed. Compared with this caldron of torment, the images of Hell propounded

in the Middle Ages seem unreal and fantastic. Whether he paints a Madonna and Child or a study of a man carrying a lifeless comrade (Fig. 276) he measures the psychological in terms of its physical manifestation. The compressed joints, the swelling line of muscle, the highlights of the skin: all these are the key



FIG. 275.—SIGNORELLI. TORMENTS OF THE DAMNED. CATHEDRAL, ORVIETO.

to the spiritual and emotional. The result of his analysis is reflected in a tendency to compose in details somewhat loosely organized rather than large units organically interacting. The nudes seem stripped of their skin, so intent was Signorelli upon obtaining the effect of powerful muscular action.

The images released in a flood in the 15th century are characterized by the utmost vividness and freshness. If the pictures sometimes seem crowded and too complex for the eye to grasp

them readily as a unit, it is because of a healthy eagerness to master the bewildering new mass of material that for the first time now poured in upon the artistic consciousness. But obviously the mastery of nature was not an end in itself; and with the end of the century there is noted a new desire to impart to the forms



FIG. 276.—SIGNORELLI. DRAWING. LOUVRE. PARIS.

something of the meaning that they held for Giotto and Masaccio. It was not sufficient any longer to represent the face of things with faithful realism, to marvel at one's own facility to hold the mirror up to nature. Michelangelo in the next century was to give the nude a more articulate and intense interpretation than the earlier masters, but even so it was at the expense of thrilling and intoxicating vitality and primitive sensualism that informs the work of Signorelli.

Sandro Botticelli (1447-1510) reveals the more reflective attitude characteristic of the end of the century, seeking not so much to reveal the glories of the fresh landscape, or the physical vigor and beauty of the athletic nude, as the expression of spiritual and intangible values. His eye turns from sensuous experience inward to the intellect, from tangible materials to thought and feeling about them. His style reflects this tendency to objectify abstract thought. There is something artificial about his *Birth of Venus* (Fig. 277), artificial in the sense that the subject and its

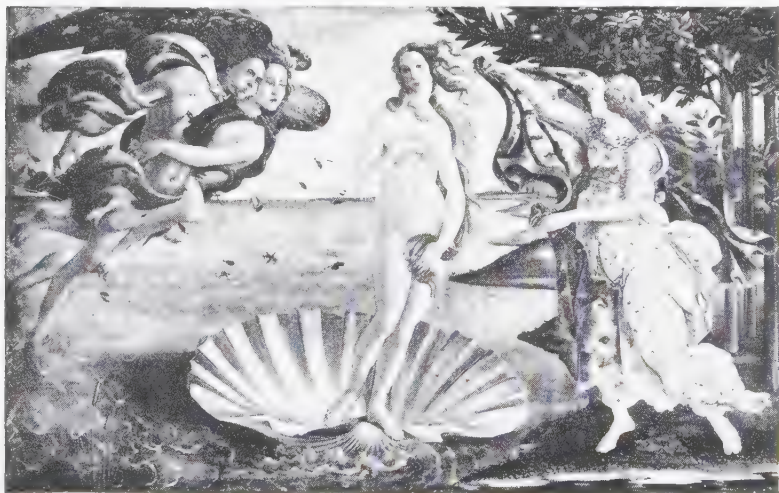


FIG. 277.—BOTTICELLI. BIRTH OF VENUS. UFFIZI GALLERY, FLORENCE.

arrangement are not derived spontaneously from a familiar experience. The figures are drawn up close to the edge of the frame to produce a continuous sequence in the foreground. The sea and the shoreline are conventionalized, the waves reduced to a pattern of V-shaped lines, and the shore to a sharp zigzag that gives no real impression of depth. The Venus, posed in self-conscious modesty, after Hellenistic copies of the fourth century statue by Praxiteles, is sharp in contour; her long coiling hair seems of spun metallic strands. She approaches the shore sadly, with reluctance to encounter the hostility of the modern world. The artist's mood is one of nostalgia for the happier times of long ago. This illustration of a myth from antiquity indicates

the current enthusiasm for classical learning and is another evidence of the tendency on the part of the painter to search outside of Christian legends for subject-matter. Though Botticelli was among the foremost realists, he turned from the methods of realism and the current thought of his times to dream of the past. While he was an artist gifted with sublime talents of poetic expression, his art was not fruitful in that it was so thoroughly personal that his followers could only imitate him. His style developed in naturalism and then he abruptly turned from nature to increasing idealism and abstractions. His later style, to which the Birth of Venus belongs, is one which made full use of sharp resonant lines. Atmosphere is almost wholly excluded in his emphasis upon a lash-like line that is inexpressibly nervous and living.

The same tendency to formalism and lyric emotionalism is manifested in Venetian art at the end of the century. If we compare Botticelli with his contemporary in Venice, Giovanni Bellini (1428-1516)—the brother of Gentile who painted the Miracle of the Cross—we note many similarities. In Giovanni Bellini's *Virgin and Child with Saints* (Fig. 278) the grouping is as formally and harmoniously balanced as in the Birth of Venus. In both, the subject is no longer expressed in familiar and commonplace terms. The action of the saints is not vulgar nor intimate, but urbane and dignified. Botticelli evokes a mood of melancholy, Bellini one of brooding religious revery embodied in vibrant colors. The Italians call such mute gatherings of saints "Sacred Conversations." Both masters exclude irrelevant details, subordinating and suppressing the trivial and accidental to the grand action of the main theme. The differences, too, are profound. Botticelli, typically Florentine, obtains his effects by precision of line and astringent colors, and the painted forms are often closely akin to sculptured ones. The work of the Venetian, on the other hand, is rich in softening atmospheric effects, and the figures are delicately modelled in warm sensuous flesh tones. Compare the nude St. Sebastian on the right in the *Virgin and Child with Saints* of Bellini with Botticelli's Venus and the difference is at once apparent.

With the turn of the century, elaborate detail and complicated narrative were abandoned for a style that is highly unified and formalized. The process of consolidation and integration of the discoveries of the pioneers in naturalism that began with Perugino,

Botticelli and Giovanni Bellini was continued. The latter, particularly, reveals the trend toward a new monumentalism based upon Nature that finds its culmination in the High Renaissance. In the *Virgin and Child with Saints*, the grouping is significant of the change. Three saints on either side of the elevated Madonna



FIG. 278.—GIOVANNI BELLINI, MADONNA AND SAINTS. ACADEMY, VENICE.

produce a sense of balance. The architectural niche provides a closed but ample space that limits the dramatic action. It is like a stage set that permits the eye to view only that which is important. The setting does not attract undue attention but merely acts as a sounding board for the dominant melody. Everything in Giovanni Bellini's pictures contributes to the new grandeur of style which is manifest in a more monumental use of architecture, and in increased order and rhythm in the treatment of draperies.

Before the close of the 15th century Leonardo da Vinci summed up the accomplishments of the age, but his art was so radical and the style he inaugurated so influential upon the art of the new century that for our purpose it is better to consider him in the light of the High Renaissance, though he is the one figure who overlaps and links the two main periods of Italian Renaissance painting.

B. THE HIGH RENAISSANCE IN FLORENCE AND ROME

The painters of the early Renaissance were primarily concerned with translating the centuries-old religious themes into naturalistic terms. This translation was a process of imparting blood and fiber to the bare symbols of the Middle Ages, a method that is generally called Humanism, since it expressed abstractions of love, sacrifice and divinity in terms of humanity, concepts which for ages past had been formulated in a language of symbols. The gods, this time the Christian gods, came down to earth as they did in Hellenistic art. Instead of being symbolized in an abstract pattern, the Virgin was represented as a loving and compassionate mother. Thus was the message of St. Francis realized in the humanism of Renaissance thought. Man, his conflicts, suffering, his love and hate, is the theme of modern painting; and the human figure and all that has natural relationship to it in the way of architectural and landscape setting constitute the invariable subject matter of art in this age.

When the Early Renaissance cult of naturalism had run its course, when it seemed that painting had reached the limits of representation and dramatization, Botticelli turned to his inner dreams. Had all his contemporaries followed his example, painting could hardly have lived, but there appeared at the end of the 15th century a greater intelligence than had hitherto been known, to further the study of nature and at the same time to find in it new truths bearing upon life. Leonardo da Vinci (1452-1519) was the first of those giants of whom we always think when the Renaissance is mentioned. In our day, we are prone to consider him a scientist quite as much as an artist, since his notebooks were filled with scientific observations, projects for the submarine, military tank, airplane, and anatomical, geological and astronomical studies of bewildering diversity. But because he lived in an age when art was the universal medium of expres-

sion, his greatest influence came through his interest in art. As a scientist, he learned all the 15th century could teach him about perspective and the rendering of movement and anatomy, and in addition he made exhaustive new observations. As an artist, he attempted to find new significance in the scientific facts he dis-



FIG. 279.—LEONARDO DA VINCI. ADORATION OF THE MAGI. UFFIZI GALLERY, FLORENCE.

covered. From the time of Giotto, all the Italian masters painted the Madonna and Child, attempting to interpret its meaning in human terms. Giotto gave the subject severe and epic grandeur (Fig. 256); Filippo Lippi painted a pretty mother with a bouncing baby (Fig. 270), and Filippino Lippi made the theme a study of delicate pathos and sentiment (Fig. 271). Leonardo, in his first great painting, which was never finished, harmonized the human con-

cept of the Madonna with the religious. Perhaps it is better to say that in his *Adoration of the Magi* (Fig. 279) he envisages the world thronging to the Mother and the Babe in a pilgrimage of love. Instead of confining the Virgin to a cramped throne or a narrow space before a window, Leonardo shows her seated graciously upon a bank in the open air. The throng which has gathered can only be guessed at from our small print, but there are some sixty figures represented. The earlier pictures also contained many figures, sometimes so many that it was difficult to identify the principle persons. One of the outstanding tasks of the 16th century masters was to restore to painting the clarity, monumentality and dignity appropriate to the sacred theme which had been lost sight of in the exuberant and indiscriminate naturalism of the late 15th century. Through a development of *chiaroscuro* effects, Leonardo gave the illusion of deep space by atmospheric suggestion. Furthermore, by modelling in light and shade, he accented the significant figures and subordinated the minor ones. In our picture, it is clear that the three or four main actors have been made dominant by their lightness against a dark background. Lesser pilgrims are also present, but one sees only the flash of a face or a hand, while the body is obscured in shadow. The main figures are welded into a firm pyramidal design rendered stable by the dark statuesque figures at the extreme right and left. In this carefully planned structure, Leonardo introduces the richest variety of human types. Far back in the space near the architectural ruins are tilting knights, a memory of the medieval past. In the foreground, the holy pair is encircled by young, passionate faces; old, ascetic, religious faces; men and women from the corners of the earth, all under the spell of love for the young Saviour.

Dozens of preparatory drawings were made and rejected before the most expressive poses were discovered and linked to form the whole. A similar condensation and monumental grouping is seen in the *Cartoon* (or sketch) of *St. Anne* (Fig. 280). The old rules of iconography called for a picture illustrating the genealogy of the Christ, with Mary seated in the lap of her mother St. Anne. With naturalistic bulky figures, this awkward arrangement would seem an insurmountable problem for the artist, yet Leonardo again uses the softening effects of *chiaroscuro* to produce a plausible and dignified group. This effect is achieved by

emphasis upon the spiritual and psychological union rather than the physical juxtaposition of bodies. In a design of large figures



FIG. 280.—LEONARDO DA VINCI. ST. ANNE AND THE VIRGIN. DRAWING. BURLINGTON HOUSE, LONDON.

united to form a compact pyramid that fills the picture space, he has solved the problem of grouping forms that are closely in-

tegrated yet possessing individuality of their own. Nearly every subsequent painting of the Holy Family was to reflect some aspect of Leonardo's genius.

How thoroughly Leonardo revolutionized the style of the 15th century will be seen when one compares his *Last Supper* (Fig. 281) with Ghirlandaio's (Fig. 274). Where the latter is prolix in detail, Leonardo is brief and dramatic. In the 15th century picture, the disciples sit placidly at the table, almost as if unaware of Christ's words. The incidentals are as interesting as the main subject; one's eye is caught by the cat waiting expectantly on the floor, the vase of flowers in the window, the birds sailing over the garden. Leonardo banishes all such trivialities. He directs our

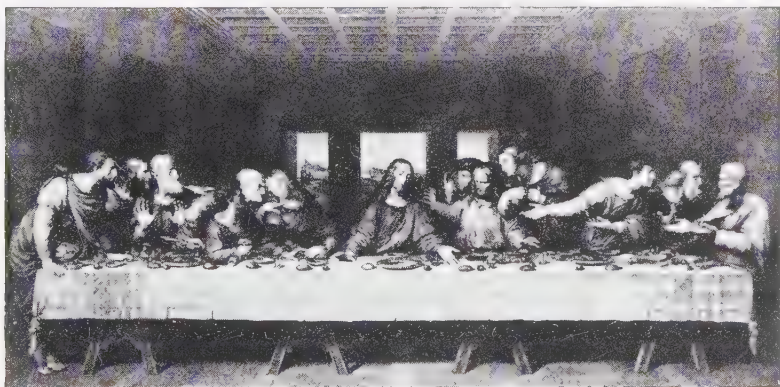


FIG. 281.—LEONARDO DA VINCI. LAST SUPPER. S. MARIA DELLE GRAZIE, MILAN.

attention to what is happening, as Christ says, "One among ye shall betray me," and at His gesture of resignation, His disciples are electrified with sudden emotions of protestation, horror, despair. Each responds according to his nature in a torrent of released emotion.

The problem of presenting this highly complex drama is solved so completely that as we view the picture, it seems to present no difficulty at all. Every gesture and expression is clearly defined and contributes to the total effect. The question may well arise how Leonardo, while preserving a closely coordinated and monumental design, still manages to tell so much about the thirteen characters and sustain the dramatic unity at the same time. The

answer is found in an analysis of his design. A tapestry-hung room bare of all objects is the setting for the long table. The disciples, with Christ in the exact center, are grouped on one side of the table, with Judas also, who in previous pictures had been isolated in an awkward position on the other side. These thirteen figures are divided into five groups, the disciples being in units of three, while Christ occupies the middle space alone, isolated psychologically as well as physically from the others. To give further emphasis to Christ, His head is silhouetted against the sky in a kind of natural halo of light effected by means of a window in the end wall. If the lines of the architecture, the tapestry edges, the beams of the ceiling and the pavement lines are projected, they converge at Christ's head, and make Him the point of optical concentration. The disciples, despite the grouping (or perhaps because of it), form an integral unit of expression, for none of them, even those standing, breaks the horizontal movement toward Christ. Their gestures furnish the unifying element in articulating their emotion. Only Judas, his dark face in the shadow, recoils in hate and fear. As in the Adoration of the Magi, Leonardo has given a universal image of man. The disciples he represents are not literal renderings of chance models, but typical men, abstractions condensed and generalized from thousands of studies of humanity made by the painter. Strictly speaking, this celebrated religious painting is not fundamentally religious in character. It represents the psychological observations of the profoundest scientist of his century making a synthesis of his investigations through the prevailing medium of art.

It was through his continuous contact with Nature, which he viewed as the artist's only true guide, that Leonardo fertilized European art with profound spirituality. Everything he touched he endowed with grace and loveliness, dignity and grandeur. He is a living reminder that the artist with intelligence and sensitivity may shape the symbols of love and faith by which men live. More than any other man he closed the gap in men's minds which separates Man from Nature. Through comprehension and love he translated science into poetry and harmonized the two worlds of outer and inner experience.

Like Leonardo, Michelangelo (1475-1564) belongs among the titans of the 16th century. As sculptor, architect, painter and

poet he embraces all the arts. But it was as a sculptor that he revealed himself and his age even when he painted. As a youth he had learned the painter's craft with Ghirlandaio, but he soon devoted himself exclusively to sculpture until the Pope demanded that he leave his chisel and marble to decorate the ceiling of the Sistine Chapel in Rome. Given a free hand, he conceived a tremendous decorative scheme, using the nude human figure as a basis for the huge fabric. Down the center of the ceiling in nine rectangular panels are recorded the incidents of the epic

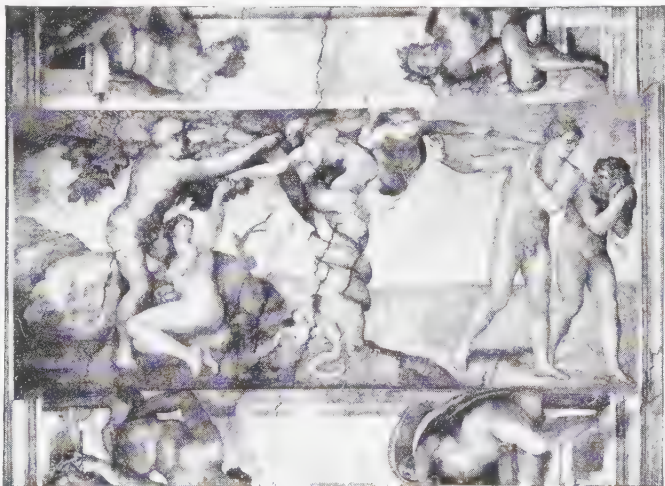


FIG. 282.—MICHELANGELO. FALL OF MAN. SISTINE CHAPEL, ROME.

of mankind from the Creation to the Deluge. In the *Fall of Man* (Fig. 282) the two heroic parents receive the forbidden fruit from the serpent. The Garden of Paradise is a desolate rocky spot in the wilderness, but the inhabitants are instinct with colossal powers. Eagerly they accept the fruit of knowledge and with bitter reluctance they take their leave of Paradise, thrust out into a world of pain and labor by an angel with flaming sword, Adam overwhelmed by an awful sense of guilt, Eve bitterly bewailing her unhappy fate. As Leonardo interpreted the Biblical subjects in human terms, so Michelangelo too passed beyond a simple repetition of an ancient legend. To him, the fall of man from his first innocence was the beginning of his endless conflict with

evil, a conflict that forces him to labor with sweat and pain to attain peace that is denied by an inexorable world, a strife that strains every nerve and fiber of man's intellectual and moral nature. All that Michelangelo says is conveyed through the action of the figure. Impelled by the power he sensed in the frescoes of Masaccio and Signorelli, and guided by his exhaustive knowledge of the body gained through intensive study of cadavers, he made the human form more expressive than it had ever been before.

The last panel painted in the Sistine Ceiling series represents *God Separating Day from Night* (Fig. 283). How vain to attempt to render so colossal an idea in pictorial language! But Michelangelo overwhelms us by the thought he embodies here. From the outer darkness of uncreated chaos, a supernatural and cosmic being emerges, so mighty that the imagination can hardly conceive it. With a powerful movement involving the whole body, the Almighty thrusts back the clouds of darkness and performs the miracle that rendered the universe intelligible. As if the painter realized that the imagination must play a greater part than the intellect in grasping the meaning of the idea portrayed, the sharply-defined sculpturesque figures employed elsewhere in the series are renounced for a half-obsured image engulfed in the receding shadow of the heavens. The effect produced suggests the rhythm of cosmic forces convulsed in creation.

The main panels of the Sistine Ceiling appear as if they were rectangular openings in the vault of the chapel, framed by painted mouldings. These mouldings are in turn supported by cornices with a heavy block at each corner of the panels, upon which are the seated figures of nude athletes or slaves. Ostensibly, their purpose is to support the heavy garlands and ribbons connecting the decorative medallions; actually they perform a kind of plastic dance to accompany the figures of the main panels. Varying spiritual moods are expressed in their contortions which are impossible of human attainment in many cases yet rendered plausible by the painter's marvellous command of the human form. Some of the youths are weighted down by their burden, their joints and muscles compressed under the crushing weight. Others appear so light and volatile that they all but spring from their positions. Depression and exaltation, lassitude and vitality, tragedy and



FIG. 283.—MICHELANGELO. GOD SEPARATING DAY FROM NIGHT.
SISTINE CHAPEL, ROME.

solemn joy all appear in these figures, attributes of the human spirit and of the human body which are not considered by Michelangelo as a duality but as one and the same. Each slave plays a part in the whole design comparable to that of the individual movements of a Beethoven symphony. The modes of the spirit are dominant in the heroic Prophets and Sibyls. The *Jeremiah* (Fig. 284), most melancholy of the prophets, is thought to be a portrait of Michelangelo himself since he is clothed in a



FIG. 284.—MICHELANGELO. JEREMIAH. SISTINE CHAPEL, ROME.



FIG. 285.—MICHELANGELO. DELPHIC SIBYL. SISTINE CHAPEL, ROME.

sculptor's smock. Crouched on a low throne, the massive figure assumes an almost circular form. Heavy and falling lines define the ponderous bulk of the body. The head inclining heavily upon the arm supported by the knee, the muscular inert left hand, bespeak a colossal power made impotent by frustration. For a parallel to such tragic brooding, one must look to the lamentations of Job or the Melancholia of Dürer (Fig. 301), Michelangelo's great German contemporary. A contrasting mood is that of the *Delphic Sibyl* (Fig. 285). The seer, holding the script of her prophecy, is buoyantly elevated by a voice toward which she suddenly turns. The spirit and the flesh are made strong and free by understanding. The erect head, the strong serenity of the

clear glance, the lifted arm and the triumphant sweep of the mantle all speak of a will to life that is denied to the Jeremiah.

In his frescoes, Michelangelo expressed himself much as he did in sculpture. By eliminating or severely subordinating the incidentals of the setting, he concentrated attention upon the large monumental figures which he painted with the same clarity and titanic vigor seen in his sculpture. Through bodily movements that are in themselves trivial, or even unnatural, they communicate the life-giving impulse of the spirit that created them. Our own muscles and joints respond to the kinesthetic sensations so powerfully suggested by statue or painted image. The language of the sculptor has been translated by Michelangelo to the flat walls in symbols that are so profoundly charged with meaning that in the ordinary sense they cannot be called beautiful. The sweet graciousness of Leonardo's lyric naturalism is denied them, for Michelangelo swept it aside in a thunderous language of plastic forms. Nor are the forms realistic in the sense of being representations of actual living men and women. Rather through abstractions of his models based upon an amazing knowledge of the physical body, he constructs heroic and convincing symbols of humanity.

Raphael (1483-1520), the third of the great High Renaissance painters, was just the opposite of Michelangelo in temperament and personality. Taught in the studio of Perugino in Perugia, he came to Florence to discover that the detailed style he had faithfully absorbed from his master was now old-fashioned. Leonardo and Michelangelo were the popular gods in Florence, and he was quick to perceive wherein consisted their unquestioned leadership. It was clear that the small delicate landscapes, the dreamy-eyed saints and the quiet rhythms of his compositions in Perugino's style would not suffice in a city becoming accustomed to the heady outpourings of Michelangelo's art. His first attempts in Florence to combine his natural lyric grace with the dramatic force of the current style were almost grotesque. But it was his peculiar genius to absorb the artistic gifts of those about him; with marvellous intuition he was able to grasp the architectural concepts of Bramante, the sculptural impulses of Michelangelo and the pictorial subtleties of Leonardo, welding them with intelligence and tact into a style that was his own.

Like Michelangelo and many another, Raphael was called to Rome to the service of the Pope, and it fell to his lot to decorate the

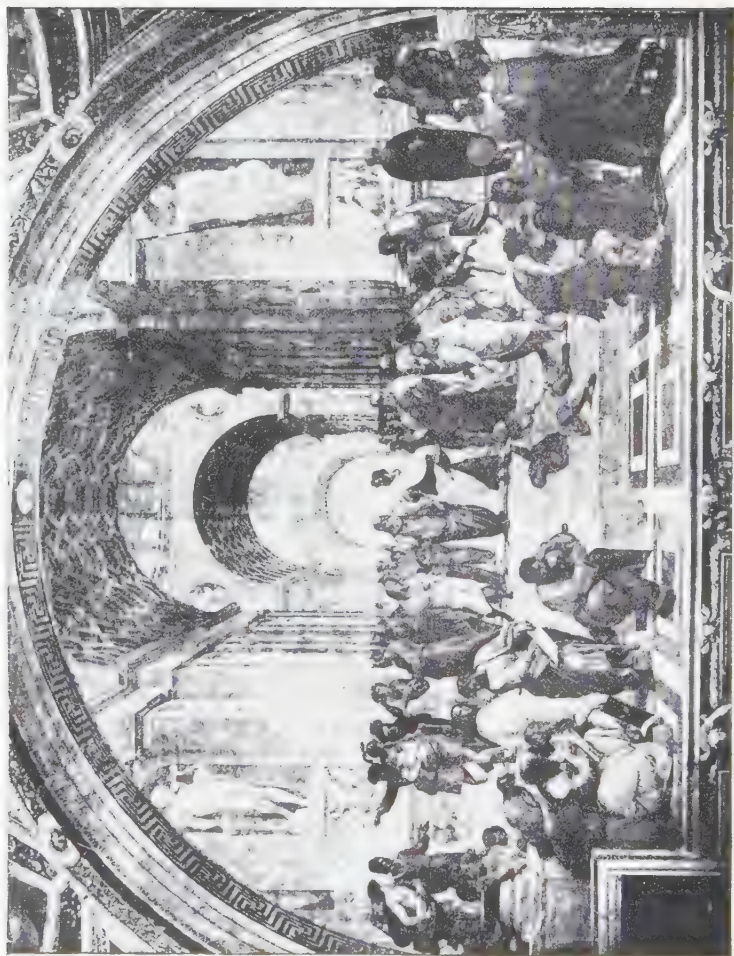


FIG. 286.—RAPHAEL. SCHOOL OF ATHENS. VATICAN, ROME.

rooms of the Vatican palace. One of his large decorations is the *School of Athens* (Fig. 286), an allegory of philosophy. Under the spreading vaults of a fanciful temple are gathered all the celebrated scholars, scientists and philosophers of the ancient world. With the Last Supper of Leonardo in mind, Raphael composed a lucid and concentrated mural decoration in a monumental scheme. In the center are the two great philosophers of ancient Greece, Aristotle and Plato. Lest they be lost in the throng, a compelling triple accent of soaring arches rises immediately above them. The actual shape of the wall is echoed in the painted architectural vaults, and through these spreading arches, the multitude is unified in articulated space. The figures in the middle ground, flanking Aristotle and Plato, are arranged in a continuous horizontal band. In the foreground, right and left, the two smaller groups, balanced one against the other, further articulate the pictorial space. It is an almost perfect solution of the problem of pictorial mural decoration. Stated simply, this problem is to decorate a wall pictorially without destroying its space-defining function as part of the actual architecture. The effect Raphael produces is not that of a hole broken through the wall and revealing depth, an effect produced inadvertently by too many over-zealous 15th century masters. By organizing the individual figures of the coordinated groups into surface patterns horizontally oriented, Raphael preserves the wall plane inviolate. Its surface is perfectly integrated with the abstract space representation. The inborn feeling for space organized by articulate rhythms that Raphael inherited from his Umbrian master Perugino, is raised in the *School of Athens* to its highest capabilities of expression. For sheer intelligence combined with a sense for the harmonious and rational, it is one of the finest decorative murals ever conceived.

The most widely known works of Raphael are his various paintings of the Madonna and Child. Usually these consist of some variation of the scheme evolved by Leonardo, who with fine condensation arranged his figures in pyramidal groups, as in the *Adoration of the Magi* (Fig. 279) and the *Cartoon of St. Anne* (Fig. 280). Raphael brought forth his most sublime treatment of the theme in the *Sistine Madonna* (Fig. 287). Characteristic of the High Renaissance style is the monumental treatment of the figures to which the background has been subordinated. The Virgin, silhouetted against a cloud of tiny cherub heads, is balanced

symmetrically by the figures of Pope Sixtus and St. Barbara. The design has been unified largely through the flowing line rising in the garment folds of the Pope and continuing through the silhouette of the Virgin, attaining the apex of her head. From this point the line falls slowly and gracefully, descending through the curtain and the billowing mantle. The double accent of the wind-blown drapery arrests the downward movement when it comes to a full pause in the Saint Barbara only to continue through her lowered glance. The elfish cherubs resting their jaunty heads on the lower frame halt the movement, deflecting it upward again



FIG. 287.—RAPHAEL. SISTINE MADONNA. GALLERY, DRESDEN.

to complete the wonderfully rhythmic and continuous movement of the figures, which in themselves are motionless. Through the melodious cadence of the forms, Raphael attains the grandiose dignity befitting his theme. While lacking something of the penetrating analysis of Leonardo and Michelangelo, Raphael conceived a classic harmony of forms that recalls certain phases of Greek and Roman art. In the detail of *The Fire in the Borgo* (Fig. 288) an example is seen of his magnificent sense of design. Balancing her burden, the woman moves with god-like grace, the rippling of her garment a foil

for the statuesque form underneath.

The peculiar requirements of decorative frescoes and religious themes demanded abstraction and generalized treatment, but in his portraits Raphael explores profoundly the human heart and mind. The power and intelligence of the Renaissance leaders were unforgettably recorded by his brush in a series of celebrated portraits, among them that of *Tommaso Inghirami* (Fig. 289). The flowing outlines of the bowed shoulders merge with the contours of the face and the cap, and create a movement that continues in the arms and contrasts the entire body with the static forms of the

table and books. Nor has the characteristic physical appearance of the individual been sacrificed to an abstraction of moral and intellectual qualities. The defect of the Cardinal's eye is clearly evident, but it has been properly subordinated to the basic personality of the man. Raphael's work is characteristic of the High Renaissance in that it never presents novel or unexpected observations of his subjects. His mind was intent upon weaving gracious patterns which in their logic and lucidity reveal hidden and fugitive relationships. The nobility of his great frescoes and the tenderness of his sacred pictures grow out of a mind wonderfully alert to the formal relations of line, mass and space that express intangible spiritual truths.

C. THE HIGH RENAISSANCE IN VENICE

The city of Florence, situated in central Italy, is the mother city of Masaccio, Leonardo, Michelangelo and countless other artists of the Renaissance; here it was that Raphael went as a youth to attain his artistic maturity. A development parallel with that in Florence produced another great school of painting in Venice. Situated on the northeast coast of Italy on the upper Adriatic Sea, Venice was in constant contact with the East by virtue of her merchant marine. Protected from invasion by land or sea, her rich and independent citizens were able to indulge their love of oriental luxury. Among her sons are found no ascetic mystics like St. Francis and Fra Angelico, nor spiritual and intellectual forces like Michelangelo and Leonardo who burned their lives out in quest of the knowledge and wisdom to master their world. Intellectual and spiritual leadership belong unquestionably to Florence, an ascendancy felt even in Venice



FIG. 288.—RAPHAEL. FIRE IN THE BORGO. DETAIL. VATICAN, ROME.

through the near-by city of Padua, where Giotto and Donatello had left great frescoes and sculptures. There Mantegna had given powerful impetus to the Venetian brothers Bellini in the 15th century. Gentile Bellini's love for colorful pageantry, seen in the *Miracle of the True Cross* (Fig. 273) with its deeply vibrating colorism, indicates the direction that the Venetian masters of the



FIG. 289.—RAPHAEL. TOMMASO INGHIRAMI. GARDNER COLLECTION, BOSTON.

16th century were to follow; and indeed Giovanni Bellini shows himself very close to the typical style of the new century in his painting of the *Madonna with Saints* (Fig. 278) with its grandiose formalism and refinement of mood.

The first illustrious name of the Venetian High Renaissance is that of Giorgione (1478-1511). The growing predilection of the Renaissance for classical themes noted in Botticelli's *Birth of Venus* (Fig. 277) is again apparent in Giorgione's *Sleeping Venus* (Fig. 290). But a comparison of the two pictures will reveal at

once the difference between the Florentine school and the Venetian. The idyllic loveliness of Giorgione's *Venus* is something new in painting. Never has the goddess of love been revealed with so much warmth and gracious beauty. Asleep in the spacious landscape, she seems a part of it as the swelling lines of her supple body blend with the undulating hills. But the living contours are softened and enriched by warm and sensuous color. Contrast with this abundant sensuousness the abstract and metallic linearism of Botticelli, his pale and static color. If the Florentines explored



FIG. 290.—GIORGIONE. SLEEPING VENUS. GALLERY, DRESDEN.

the realm of the mind in their painting, the Venetians took for their province the senses and emotions. The clear, sharp, linear and sculpturesque images of Raphael and Michelangelo, which speak so distinctly to the sense of order and controlled thought, yield in Venice to the language of color which may be seductively compelling, violently passionate or subtly evasive. It is with deep insight and sympathy that Giorgione records the features of a monk turning from his musical instrument in *The Concert* (Fig. 291), still held by the flood of feeling that the music at his finger tips has just aroused. Where Raphael records with fine precision the definite contours of form in the *Tommaso Inghirami* (Fig.

280) to create a solid sculpturesque effect, Giorgione records the fugitive light in sensuous color vibrations.

No other Venetian ever attained the poetic vision of Giorgione. But Titian (1477-1576), born the year before and surviving him by nearly seventy years, was the grand master of the school. Throughout the almost legendary length of his ninety-nine years, his art never stood still; he remained in the forefront of his age. While Raphael and Michelangelo were covering spacious walls in Rome, Titian was painting a huge altarpiece representing the *Assump-*

tion of the Virgin (Fig. 292).

It is interesting to observe that he followed the same grandiose scheme as his Florentine contemporaries. The Virgin, a full-bodied matron of sublime beauty, is miraculously borne toward heaven by a throng of angels. On the ground the disciples are thrown into a turmoil of amazement and adoration. A single uplifted arm makes the natural transition to the cloud-bank where the Virgin with arms raised in heavenly transport stands defined against the intense light of her glory. The curving band of angels leads the eye to the floating figure of God the Father in what seems



FIG. 291.—GIORGIONE, THE CONCERT DETAIL, PITTI GALLERY, FLORENCE.

to be the very vault of Heaven. Such a highly dramatic treatment might easily fall into bathos and melodrama, yet Titian maintains the intensity of the moment through a simple design in which every element contributes to the single effect. Like the Florentines, he subordinates the individuals to the dramatic intent, excluding all that has no direct bearing upon the main theme.

Titian brought to Italian painting a refreshing pagan naturalism that is all the more noticeable by contrast with the ascetic and intellectualized art of central Italy. Compare the rich verdure of the background in his *Fall of Man* (Fig. 293) with the arid Eden in Michelangelo's fresco (Fig. 282). Titian's Eve is gracious

and lovely, his Adam masculine. The action in his canvas is more psychologically analytical as Eve bends forward, eager to accept the fruit, while Adam raises an apprehensive hand of protest.



FIG. 292.—TITIAN. ASSUMPTION OF THE VIRGIN. CHURCH OF THE FRARI, VENICE.

Where Michelangelo presents the epic of man's conflict with evil in a closely-knit pattern of sculptural forms, Titian interprets the struggle through its sensuous and erotic implications. Though

Titian's Adam and Eve are monumental and statuesque, they are of flesh and blood, inhabitants of a living world of clouds and trees and air, rather than superhuman and abstract entities.



FIG. 293.—TITIAN. FALL OF MAN. PRADO, MADRID.

The attempt of the Italian masters to see the world whole, to view the face of Nature, comes to fruition in the paganism of Titian. Unconstrained by the pressing demand of symbolism inherited from the Middle Ages, he looked upon his world with an



FIG. 294.—TITIAN, NYMPH AND SHEPHERD, IMPERIAL GALLERY,
VIENNA

eye passionately aware of physical beauty and from this beauty he fashioned a fresh and vigorous symbol of a humanity which is one with Nature. More often than not, he evaded the fixed iconography of Christianity, and frequently his profoundest expression is found in the secular portraits and in the myths of antiquity. In the *Nymph and Shepherd* (Fig. 204) the two pastoral lovers



FIG. 295 —TITIAN. PIETÀ. ACADEMY, VENICE.

are bathed in ambient light and air. Observe their intense throbbing ardor in a landscape in which the very trees incline to observe the drama of human love. Compared with Titian's warm sensuousness, the sculpturesque abstractions of the Florentines seem austere and frigid. For the central Italians, landscape was only a neutral setting for statuesque figures, but with Titian Man became part of the landscape, both being inseparable manifestations of Nature. Even when architecture is the setting of a theme, as in the *Pietà*

(Fig. 295), the enveloping light fuses the whole complex of forms into a unified drama. Instead of a tense architectonic pattern of lines and silhouettes, such as Raphael composed in his *Sistine Madonna* (Fig. 287), Titian's painting is shaped by somber forms that emerge from the glowing atmosphere. The lines and silhouettes have been softened and obscured by the light, so that one sees these accents as throbbing light and color. The group falls into a compact triangle, which, with the wraith-like statues and the solid forms of the architecture, establishes a unified composition. The intensity of emotion of the tragic Virgin, the despair of the accompanying saints, recall the epic breadth of the *Lamentation* (Fig. 258) of Giotto.

With Raphael, Titian shares the highest position in portraiture in Renaissance painting. The colorism of the Venetian school was a potent instrument in revealing the secrets of the human countenance. The face of *Pietro Arctino* (Fig. 296) rising from the bulk of his rich costume reveals a character stamped by arrogance and sensuality. The grandiose treatment of the gleaming expanse of heavy silk only accentuates the grossness of the face of this notorious blackguard. In contrast with Raphael's steady movement of line delimiting the forms, Titian effects the sudden flash of color from crimson silk, the deep glowering of the too-fleshy face, producing an instantaneous impression of the complete personality.

The freer pattern of the Venetians, their more casual arrangement of space and forms, was exploited by Tintoretto (1518-94). In his huge canvases and murals the colors are deeper than in Titian's; the movement has become almost explosive. The sober compositions characteristic of the earlier years of the 16th century yield to more exciting and dramatic contrasts of light and space.



FIG. 296.—TITIAN. PIETRO ARCTINO. PITTÌ GALLERY, FLORENCE.

The *Allegory of the Milky Way* (Fig. 297) indicates how exotic imagination leads Tintoretto to the very limits of pictorial invention in visualizing a poetic concept of the origin of the stars. He might have called it an allegory of space, for here are mingled the creatures of the uncharted heavens, riotously plunging through the air: cherubs, clouds, stars, birds and animated, darting figures revolving in the free atmosphere. Raphael would have con-



FIG. 297.—TINTORETTO. ALLEGORY OF THE MILKY WAY. NATIONAL GALLERY, LONDON.

sidered this the negation of everything painting should be, with its tumbling forms falling in violent diagonals, and its profusion of spotty shapes half hidden in darkness.

Stylistically, the typical procedure in the designing of paintings in the High Renaissance was to group the large statuesque figures close to the front of the picture frame, in a single plane reading from left to right. Such a scheme is that of the *Fall of Man* (Fig. 282) of Michelangelo and Titian (Fig. 293). It was the arrangement Raphael (Figs. 286-288) almost invariably adopted. Space is clearly articulated with definite boundaries; the figures are so drawn that the physical distribution of the body, whether

clothed or nude, is revealed with the clarity of classic sculptures. Especially definite was the bending of wrists, knees and elbows. With Tintoretto all is changed in favor of forms that retreat into space, oriented from depth toward the observer. Parts of bodies are swallowed up in shadows; contours are not stressed since the line as such is destroyed by the strong effect of atmosphere. When he painted the *Last Supper* (Fig. 298) he abandoned the traditional scheme of Leonardo and Ghirlandaio. The table is placed end-wise so that it shoots abruptly into the depth of a room that no



FIG. 298.—TINTORETTO. LAST SUPPER. S. GIORGIO MAGGIORE, VENICE.

longer has the definite limits of a closed box. The wavering and sporadic light flashes here and there, strongly illuminating some figures, leaving others virtually obscured. The observer is startled by the dazzling contrasts of light and shadow. The atmosphere is tense with crackling of the torch-light. Through a pattern of colored forms, the dramatic intensity which Leonardo explained so literally is implied by Tintoretto. The method of expressing emotion through space and movement and the pattern of light spots which was evolved through the last half of the 16th century is definitely embodied here. In this style may be seen the spectacular emotionalism that, under the impulse of the Counter-Reformation, developed into the baroque style of the 17th century.

RENAISSANCE PAINTING IN THE NORTH

NORTH of the Alps, the transition from medieval to modern thought did not occur as definitely nor as soon as it had in Italy.



(Courtesy the Boston Museum of Fine Arts)

FIG. 299.—SCHONGAUER. MADONNA IN THE COURTYARD. ENGRAVING. MUSEUM OF FINE ARTS, BOSTON.

The new humanism in Italy had definitely taken form at the beginning of the 15th century with the appearance of Masaccio, whereas the northerners throughout the century adhered pretty consistently to the so-called "primitive" or late Gothic style. It can be seen in the engravings of Schongauer (1445-91), a German engraver working toward the end of the 15th century, an example being the exquisite *Virgin Seated in a Courtyard* (Fig. 299). Infinitely refined is the sensitive line and the lyrical form that it encloses. It belongs to the age that brought forth the tiny book illuminations and the late Gothic sculpture rather than to the sturdy realistic age of the Italian Renaissance

with its robust Madonnas of Filippo Lippi and of Ghirlandaio. Charming and gracious as the engravings of Schongauer are, these very qualities point to a spiritual paucity, a decadence in which decoration and loveliness have become the motivating factors in art. A feeling for nature here indicated in the crisp delineation of a bare tree, is linked with a love of pure decoration. Observe the willful pile of drapery in which the Virgin sits, constructed not in accordance with the appearance of real garment folds but heaped up in an abstract decorative pattern. In the next century this moment of estheticism passes, giving way to more profound symbols of reality.

When Albrecht Dürer (1471-1528) appeared, the schools of art in Germany were widely dispersed, isolated from each other and having little contact with the rest of Europe. Before he died, they had been integrated under his uncontested stylistic leadership. Like Leonardo and Michelangelo and the Venetians, Dürer was conscious of the spiritual function of art. He believed that the artist was nothing if he did not symbolize the whole of life in imperishable forms. Like Leonardo, he had an unquenchable thirst to know the laws of Art and Nature; his sketch books are filled with amaz-



FIG. 300.—DÜRER. STUDY OF A LANDSCAPE. WATER COLOR.
BIBLIOTHÈQUE NATIONALE, PARIS.

ing drawings and water colors, bits of landscapes, studies of trees, flowers and animals. His water colors, such as the *Study of a Landscape* (Fig. 300), are brilliant records of his passion for observing the appearance of sky and water, for the architecture of Nature obsessed him. His intellectual craving for order and rhythm in the language of forms was in part appeased by his two trips to Italy where he came in contact with the great masters of the Renaissance. No man was ever so eager to understand the spirit of the Italians. He went to Venice, not to copy the manners of Italian painters but to learn from them how they obtained condensation and philosophical depth in pictorial design. He was eager to give his own Gothic language the intellectual breadth and largeness he sensed in the Italian masterpieces. The tradition of

the book illustrators in the Gothic countries had made for a minute and precise style, analytical and descriptive. In the South, the Italians had always conceived their paintings as decorating a wall.



FIG. 301.—DÜRER. MELANCHOLIA. ENGRAVING.

Mural painting demands large decorative efforts, logically and coherently executed to encompass abstract and universal ideas. When Dürer engraved upon copper his *Melancholia* (Fig. 301), he composed his picture of minute details in somewhat the way Van

Eyck and Schongauer did, observing all the tiny particles that are found in Nature. The difference lies in the manner in which Dürer subordinates the bare statement of the details to the expression of a single salient thought. The mysterious woman, crouched low on the ground, surrounded by the impedimenta of science and learning, is an image of frustration, of vast energies suspended, like the Jeremiah of Michelangelo (Fig. 284). This woman symbolizes



FIG. 302.—DÜRER. ST. ANTHONY BEFORE THE WALLS OF NUREMBURG. ENGRAVING.

the dilemma of the modern mind, faced with the loss of spiritual security that resulted from the invalidation of medieval faith; the objects about her signify the new learning with which life might be interpreted without that faith. It is the statement of a philosopher contemplating the old and the new, and an eloquent testimony of how the Renaissance was greeted in the north with many a reluctant backward glance.

Something of the same intense absorption in thought that appears in the *Melancholia* is found in the engraving of *St. Anthony before the Walls of Nuremberg* (Fig. 302). But where the effect of the *Melancholia* is one of constrained and feverish thought in accordance with the meaning of the allegory, here all is tran-

quillity. The landscape is vast and orderly, the hill rising up behind the intent figure of the seated pilgrim to echo its contours in the peaked roofs and craggy walls of the city. This engraving was made some five years after the *Melancholia* and reflects the victory in Dürer's spirit of the principles of Renaissance thought, both as to content and the manner of expressing it. Quite apart from the fact that it embodies a serene faith very different from the brooding doubt of the *Melancholia*, it reveals the esthetic delight experienced by the artist himself in making it, in reducing the various objects portrayed to *engraved* objects. In nothing does Dürer reveal the Renaissance spirit more than in this insistence upon the integrity of his medium. In the resolution of the spiritual agony of the *Melancholia* into assurance and repose, he has realized the meaning of a life "inspired by love and guided by reason." The quiet harmonies of the forms reflect a synthesis achieved by Dürer in his own way that is comparable to that made by Leonardo in comprehending through intelligence and reverence the bewildering complex that is Nature. The greatness of this achievement is the more notable when it is understood that as an artist, Dürer stands alone, an isolated giant in a country that had hardly felt the spiritual warmth of Italian humanism. With Erasmus and Luther, he brought the light of the Renaissance to the northern world.

In the work of Matthias Grünewald, there is a combination of late Gothic expression and the formal monumentalism of the age. In the *Crucifixion* (Fig. 303) from the Isenheim Altarpiece, painted about 1510, the figures are drawn up to the foreground and the setting subordinated in order that their significance may not be obscured. Apart from this, there is hardly a trace of any influence that relates it to contemporary Italian work. The arrangement is asymmetrical, emotionally rather than formally unified with the insistently pointing figure of John the Baptist and his words "He must grow and I must diminish" balanced against the kneeling Magdalene and the Virgin swooning in the arms of John the Evangelist. Throughout, it seems that qualities making for lack of beauty have been emphasized. The body of Christ is a livid green, already decomposing. The accompanying figures are harsh and angular, strident in color contrasts and the emotions that sway them. Such a conception of the Crucifixion is utterly foreign

either to the sublime faith of the Middle Ages or the esthetically unified scene imagined by the Italian Renaissance. Explanation of it can be found in the fact that it was painted for one of the monasteries of St. Anthony in which venereal disabilities were treated. It sets forth a new and personal interpretation of the

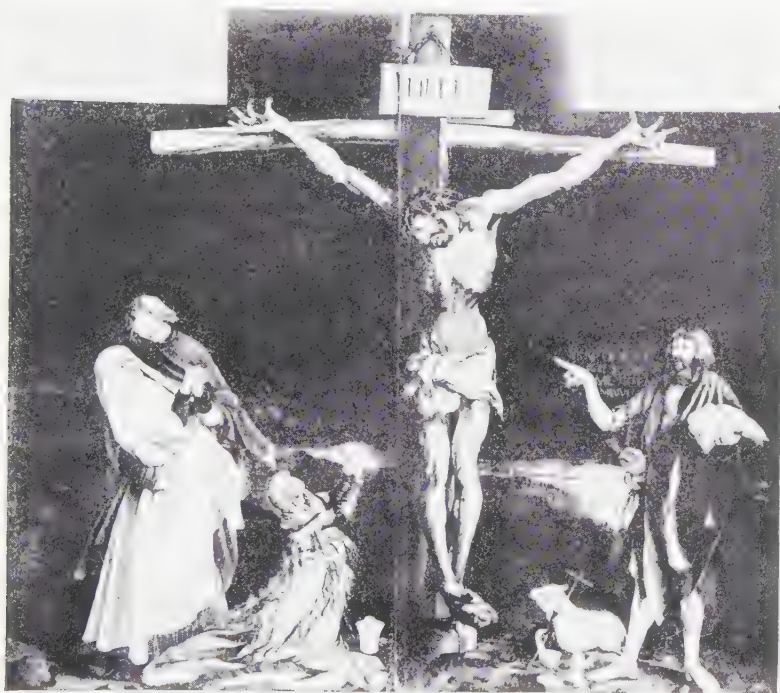


FIG. 303.—GRÜNEWALD. CRUCIFIXION. THE ISENHEIM ALTARPIECE. MUSEUM, COLMAR.

death of Christ, that it brought salvation even to those unfortunates who suffer from the most loathsome of diseases. In this more than in the technique does it reveal the change that has taken place since the medieval period. At the same time, the idea set forth in the scene acquires concreteness and character in the plastically conceived figures and the emphasis on the third dimension that appears in them.

Hans Holbein (1497-1543), the third great German master of

the 16th century, began his work only after the way had been shown by Dürer. Lacking the fiery moral and intellectual conflicts that lie back of Dürer's art, Holbein was a painter of almost superhuman detachment. He attained his highest expressions in portraits, possibly the coolest and wisest ever contrived. In England he became the official painter to the royal court. Among the scores of portraits in chalk and oil which he executed, one of the most famous is that of *Henry VIII* (Fig. 304). Holbein's interpretation is crafty and caustic. Henry, bravely arrayed in the pompous trappings of his office, stands full face in a frame



FIG. 304.—HOLBEIN, HENRY VIII.
CORSINI GALLERY, ROME.

which seems too small to contain his overbearing presence. The bull neck, beady eyes, tight sensuous mouth and small puffy hands are pitilessly displayed against the prominently detailed costume. The richness of fabric and jewels emphasizes the florid personality revelling in barbaric splendor. Though the portrait is extraordinarily analytical, the details are united in a wonderfully coherent pattern. When Holbein painted the features of the humanist *Erasmus* (Fig. 305) the design varied from that of the other portrait, just as the personality of his subject was different. The figure is

smaller, the room space more ample. The tightness and tension of the King's portrait have vanished. Here the scholar sits at ease in the quiet atmosphere of his study, his attention directed to his writing. The blended colors and the apparently casual composition of the forms characterize the mood and activity of a gentle contemplative spirit. Holbein, with an eye quick to attain a flat decorative pattern with which to summarize the solid bulk of his subject, always achieved a design that was harmonious in itself. In his portraits, there is little to recall the medievalism that stamps Dürer's pictures with such effective universality. Holbein was the last pictorial genius to emerge from Germany. The rav-

ages of the Thirty Years' War, in which three-quarters of the population of Germany was annihilated, brought to an end any further important development in the arts for a whole century.

In Flanders, painting possessed a rich heritage in the Van Eycks, Hugo van der Goes and others of the 15th century. In the 16th century, it attained fresh vitality at the hands of Peter Breughel the Elder (1525-69). As Leonardo and Michelangelo



FIG. 305.—HOLBEIN. ERASMUS. LOUVRE, PARIS.

in the South had studied the human figure to make it a vehicle for the expression of thought, so Breughel in Flanders expressed his profoundest convictions through the landscape. This manner had had its beginning in the tiny miniatures of late Gothic manuscripts. Always a constant element throughout the 15th century, it remained for Breughel to give it monumentality. In a series of paintings representing the four seasons, he gave an exhaustive account of the peasant's activity, the intimate experience of man in closest contact with the freezing air of winter, the harvest of summer and bronzed autumn. The picture representing *Summer*

(Fig. 306) hangs in the Metropolitan Museum in New York. Here peasants heavy with fatigue and the lassitude of noonday heat sit eating or sprawl asleep beneath a tree in a harvest field. Breughel sees everything: the peasants' voracious habits of eating, the precise method of harvesting grain, the jug of water standing in the shade, the birds in the air, the village in the distance with children at play. For the first time in art, the anonymous and inarticulate aspects of man's communal activity and the familiar



(Courtesy the Metropolitan Museum)

FIG. 306.—BREUGHEL. SUMMER. METROPOLITAN MUSEUM, N. Y.

life of the landscape have been recorded on a monumental scale. Yet the hundreds of observations, the almost countless birds and people, the buildings that sprinkle the landscapes are so skillfully distributed and controlled in the large pattern of space that the landscape is seen as a unit, logically constructed and lucidly articulated as a compact figure composition by Leonardo. By means of a large pattern in which the details become integrated structurally and psychologically, the landscape is rendered expressive of its greatest spiritual implications. Man is conceived as an in-

tegral part of Nature; the landscape results from his labors, and has significance only in terms of the form that man gives it. This is the identical truth that Leonardo had expounded in Florence earlier in the century; it is the truth that gives such great authority to the art of Titian.

The Reformation sweeping the northern countries was unconsciously expounded by Breughel. When he painted the Crucifixion it became a veiled comment on the ravages of the Spanish Inquisition which at that time was crucifying Flanders. In a deep landscape containing hundreds of tiny figures the peasants come trooping out of the town toward a distant Calvary. A ring of



FIG. 307.—BREUGHEL. PARABLE OF THE BLIND MEN. MUSEUM, NAPLES.

curious sensation seekers collect about the cross almost invisible in the distance. The implication is clear, since the setting is the Flemish countryside and the soldiers are obviously Spanish. By the same token, his *Slaughter of the Innocents* is portrayed as a savage searching party of the Inquisition brutally seizing its victims in a Flemish village. His love of the uncouth celebrations of the peasants recorded in weddings, dances and drinking bouts earned Breughel the name of Droll Peter and Peasant Breughel. But for all his humor and gusto, the devastating comments concealed in his religious paintings show him terribly conscious of the death-struggle of his people against the Spanish conquerors. His understanding of human suffering and, by inference, his comment on the pitiful plight of his countrymen, is expressed in the *Parable of the Blind Men* (Fig. 307). In a tranquil landscape, the groping

leader of a company of blind beggars stumbles and falls. His empty eye-sockets, pathetic gestures, and the expression of terror of the unknown and unseen are accurately observed and portrayed. In contrasting the wretched humans with their peaceful surroundings, Breughel embodied in his painting the deep pessimism of 16th century thought.

As the tide of Gothic thought receded and humanism replaced it as the dominant way of life, the process that was in full tide in 15th century Italy came to its height in the North, but not before the 16th century. While the new synthesis of thought was undoubtedly taking place spontaneously within Germany and Flanders, it was immeasurably accelerated by continuous contact which the northerners had with the more advanced thought of the Italians. Dürer, Breughel, Holbein, and perhaps Grünewald, all visited Italy and their art was deeply influenced by that contact. And Italy in turn was impregnated with the vital energies of the Gothic spirit that lay behind the northern Renaissance. The following century was to see a complete fusion of European art and thought, but the vitality of Italy waned and the leadership was assumed by France, the Netherlands and Spain.

PAINTING IN THE SEVENTEENTH CENTURY

THE discovery of intelligence as a creative instrument was the great achievement of the Renaissance. The discovery of the New World by Columbus was an assertion that the physical world could be dominated by intelligence. Relying upon his observations and upon the efficacy of scientific instruments, Columbus expanded man's knowledge of the physical world as Erasmus, Copernicus, Rabelais, Montaigne and Shakspeare were to expand his spiritual and intellectual world. The 17th century saw a wide dissemination of the thought of the 16th, and the establishment of the scientific point of view through the work of Galileo, Harvey and Newton. Science, art and learning, confined to a few courts and wealthy families in the Renaissance, were widely disseminated through the mechanical art of printing and through the growing cultural and economic ascendancy of the middle classes.

Though no longer dominant, the Church continued to employ the service of the arts, but the service was purely nominal. The Christian doctrine was no longer able to call forth the sublime images that even the Renaissance had produced. The century that systematized modern science turned its attention to the immediately perceptible world, to genre scenes, the landscape and portraiture. The sacred pictures that appear occasionally have no longer the hieratical authority of old. The formal Renaissance method of constructing pictures had been profoundly modified by Tintoretto, whose *Last Supper* (Fig. 298) broke radically with the almost fixed type adhered to by Leonardo and others of his time. When Peter Paul Rubens (1577-1640), the greatest of the 17th century Flemings, painted the *Last Supper* (Fig. 308), he too seemed to break all the rules of a tradition of centuries. Instead of being in a compactly arranged group, placed horizontally on one side of the table, balanced and static like a sculptured monument, one finds the disciples seated almost haphazardly around a table, an arrangement as apparently casual as that in an informal

snap-shot. The cool even light of Leonardo's composition that rendered the forms so definite and easily grasped in their entirety, was changed by Rubens for the natural light of a room, illuminating a face here and a hand there, and leaving parts in complete shadow. The line no longer plays an important rôle in this blurred atmospheric style in which forms appear as emergent masses partially concealed. And how differently Rubens represents the room



FIG. 308. —RUBENS. LAST SUPPER. BRERA GALLERY, MILAN.

space, which, compared with Leonardo's calculated box-like enclosure, seems an intangible thing that cannot be arbitrarily confined and measured. It is something felt, something vibrant and living, as it was for baroque architects and as it had been for Rubens' predecessors in Gothic times. There is not a single quiet surface for the eye to rest upon, no straight walls or horizontal lines. On the contrary, it seems that the painter consciously avoided anything that would suggest repose in his pictorial translation of the psychological intensity of the moment. Instinctively the eye penetrates the deep space-pattern of the figures nearest the observer, to the illumined face of Christ who is set off from all the

others by spots of light directly above His head and on the table before Him. Judas is distinguished as in Leonardo's painting, by the ominous shadow that obscures his features.

However fresh and vigorous his interpretation of the old Biblical subjects, Rubens excels where his enormous energies are directed toward secular and pagan themes. A man of boundless health and vitality, he endowed all his paintings with his own sensuous animalism. In him, gusty Flemish naturalism and virility



FIG. 309.—RUBENS. RAPE OF THE DAUGHTERS OF LEUCIPPUS. ALTE PINAKOTHEK, MUNICH.

were blended with Italian abstraction. For eight years he was a student in Italy, where his eager mind absorbed the heroic sculptural painting of Michelangelo and the colorism of the Venetians. From the Italians, he took only what could be incorporated into his own dynamic language, a sense for monumental design and decoration and an unerring feeling for the abstract idea expressed by his forms. The themes of the pagan world came to life under his brush with a passionate vitality, themes that the Greeks had expressed in calm and reposeful abstractions, while even the Renaissance masters, except for Titian, seemed only to have vaguely imagined them as filled with pulsating life. For Rubens

the *Rape of the Daughters of Leucippus* (Fig. 309) was a free allegory of eroticism, a splendid theatrical tableau expressed in the manner of grand opera. With masculine ardor, the twins Castor and Pollux seize the two voluptuous beauties who nominally resist the attack. The horses and the figures form a compact swirling mass silhouetted against the sky. The ample landscape is subordinated to the dramatic narrative after the manner of the Italian masters. But the liveliness of action and the warm dynamic



FIG. 310.—RUBENS. THE GARDEN OF LOVE. GALLERY, DRESDEN.

physical beauty of nude women had never before been so directly and vividly portrayed. In these large decorative paintings, one will not find the condensation, the finish and perfection of the small panels of the early Flemish masters. Like the Italian frescoes they are designed to be seen at a distance and in their entirety.

Love in its diverse forms is a subject treated frequently by Rubens. In the mad dionysiac dances of a peasant festival, in the amorous activities of the ancient gods, he paid lavish tribute to the life-giving Aphrodite. The *Garden of Love* (Fig. 310) is a classic theme rendered in the idiom of the time. Robust lovers

with sturdy loves converse or stroll in a baroque courtyard. An impetuous Cupid persuades the reticent to the ritual of love. The luxurious garden, perfumed atmosphere and the shining richness of silken draperies, are fitting adjuncts to this dream-court of love, presided over by a Venus with flowing breasts. The movement of forms in the Rape of the Daughters of Leucippus has here become a pervasive shimmer over the entire painting, a method anticipating that of the 18th century rococo painters.

Whatever Rubens painted glows and vibrates with exuberant vitality. His expression is so vigorous, even violent, that the casual observer will often be repulsed by his fierce animalism and stinging sensuality. A torrential flood of pictures poured from his studio; his energies seemed inexhaustible. His influence extended far and wide, even into French art in the 18th and 19th centuries when Watteau and Delacroix returned to him again and again. His greatest pupil was Anthony Van Dyck (1599-1631), a gentler spirit who did not inherit his master's abundant vitality, though in his short life, he painted some fifteen hundred canvases, chiefly portraits. Sensitive, reticent and urbane, his marvellously interpretative portraits are among the greatest of the century. He was at his best in depicting refined and cultured faces such as that of *Cornelius van der Geest* (Fig. 311). The delicate texture of the cheek, the proud head, all these express the patrician nobility of the subject. Van Dyck was instrumental in transmitting something of the Flemish vitality of design and color to the English school of the 18th century.

The art of Italy, which fired Rubens with desire for the heroic and the grandiose and fed his appetite for all that was noble in the classic past, only indirectly affected neighboring Dutch artists. Flanders was Catholic, and Rubens shared the aflatus of the Counter-Reformation which sought to assert the primacy of the



FIG. 311.—VAN DYCK. CORNELIUS VAN DER GEEST. NATIONAL GALLERY, LONDON.

Church through the dazzling splendor of the spectacular and dramatic in architecture, sculpture and painting. Rubens was furthermore a gentleman of wealth and aristocratic culture. As an ambassador of kings and a scholar of note, he belonged to the social world of the aristocrat and the intellectual. The painters



FIG. 312.—BROUWER. THE SURGEON.

who were his Dutch contemporaries present quite a different appearance. Holland was Protestant and wealthy, her citizens good industrious merchants. The Protestant faith had no use for showy altarpieces nor was there a need for religious painting of any kind in Protestant churches. What the Dutch did demand were small realistic paintings for interior decoration. They were pleased with pictures of interiors, still lifes of luscious fruit and vegetables, landscapes and genre studies of everyday matters of the home

and street, and especially they loved portraits, either singly or in groups. The Dutch painter did not try to express a subtle and abstract idea as the Italians did, and as Rubens did under southern influence. Having won her centuries-long conflict, first with foreign powers and then against the encroaching sea, Holland set about



FIG. 313.—HALS. HILLE BOBBE. KAISER FRIEDRICH MUSEUM, BERLIN.

realistically to enjoy her freedom and prosperity. Secure within herself she asked of her painters only that they paint her likeness. There was nothing too trivial not to be of interest. Subjects unthought of by Rubens and the Italians now became of first importance to painters. Adrien Brouwer (1605-38), a brawling tavern tippler, was fascinated by the spectacle of roisterers in the public house, or, as in *The Surgeon* (Fig. 312), of a determined barber dressing the wound of a youngster who makes a wry face at the pain. While the scientists were analyzing the physical world in order to reduce it to categories and systems in the fields of astronomy, physics, and chemistry, the painters were likewise observing and making note of any and all bits of human experience. If some

of this genre painting seems trivial, it must be remembered that from this self-observation, from this inquiry into the most intimate aspects of experience, was fashioned the greatest spirit of the age, Rembrandt.

A great vigor and joyousness pervade most of Dutch art. None of the hundreds of Dutch masters was more skillful in recording the lusty vitality and humor of burgeoning Holland than Frans Hals (1584-1666). Familiar to nearly everyone is his *Laughing Cavalier* and other portraits that bubble over with good health



FIG. 314.—HALS. LADY REGENTS OF THE HOSPITAL. HALS MUSEUM, HAARLEM.

and buoyancy. He liked best to paint informal and spontaneous personalities such as the cackling *Hille Bobbe* (Fig. 313) with her parrot. At times he even approached the heights attained by Rembrandt in his penetration to the very essence of his sitter's personality. Such a painting is the *Lady Regents of the Hospital* (Fig. 314), a group portrait in which the five personalities fuse into a natural harmonious pattern, each individual distinctly portrayed, yet participating in the psychic interplay of personality that is the essence of a group. The dexterity and facility of his brush work enabled him to work with rapidity and refreshing spontaneity. A complex detail is rendered in its totality by a single

broad stroke of his brush and the whole amplified in a few accents of color and light that reveal suddenly the whole character of the subject.

Without Rembrandt van Rijn (1606-69), Dutch painting of the 17th century could be called highly talented and even brilliant; with Rembrandt's towering genius it reaches the heights. His name belongs with the few very great: Giotto, Leonardo, Michelangelo, Raphael and Titian. In his breadth of interest he spanned the century, revealing every phase of its spiritual and intellectual emanations; from the realism and materialism of its scientists, its "little masters" in painting, to the mysticism of its saints, everything may be found in the paintings and etchings of this master. No artist ever turned his heart and hand to so great a diversity of subject matter. With the sense of actuality that was born of the analytical and scientific spirit of his age, Rembrandt set about systematically to make himself master of reality in its smallest and most unobserved particles. Characteristically he took for analysis what was closest to him. With the aid of a mirror he sketched, painted and etched his own features repeatedly, not from vanity, for his face was coarse and far from beautiful, but to reduce the texture of flesh and hair and the complex pattern of light and color to a schematic arrangement on paper or canvas. Very early he came to the full realization that light was the binding medium that flowed over all visible things and united them as mortar holds together the bricks of a building. And he further observed that the light was something fluid; that it had a rhythm of movement and was endowed with a life of its own more real than that of the objects it casually illuminated. Where Raphael had found the common unifying element of art in the line and Michelangelo in the sculptured mass, Rembrandt with the Venetians found verity in color and atmosphere.

Early in life, while yet intent upon capturing the exact appearance of things, fitting the details into the fabric of design, he was continually making essays in the rhythm and flow of light and color. The early landscapes are symphonies of luminous color, harmoniously orchestrated, Wagnerian in their sweeping emotional depths. At times he came close to the border line of the abstract, to music, in the denial of the literal shape of trees and houses and streams, by abstracting from his subjects the flow and move-

ment of light. This aspect of his development may be traced in a series of group portraits. Commissioned to paint a group of medical students of Dr. Tulp in 1634, he faithfully rendered in the *Anatomy Lesson* (Fig. 315) the scene of the dissection room with each of the auditors distinctly portrayed as they listen to the argument of the demonstration. A strong light strikes full upon the cadaver, illuminating the face and hands of Dr. Tulp who is



FIG. 315.—REMBRANDT. DR. TULP'S ANATOMY LESSON. MAURITSHUIS, THE HAGUE.

appropriately set off from his students. But one has the feeling that the demands of a factual clear-cut delineation of each face have resulted in a certain artificiality and coldness. The picture represents a series of juxtaposed individuals rather than a lucidly unified group. Eight years after, he painted another group portrait, the famous *Night Watch* in Amsterdam. By this time, Rembrandt had come to feel that the demands of a mere descriptive realism were in conflict with what was for him the greater function of his art: to produce a fully unified vision of light and color playing over the forms. In his picture, he did not com-

promise his artistic vision with the clamoring demands of the stout members of the shooting club that he should produce a flattering likeness of each face. Only two or three faces are distinctly seen in strong light. The rest are caught up in the undulating movement of amber *chiaroscuro*. The result was disastrous to Rembrandt's worldly peace, for so violent was the protest of those who felt they had been cheated, that Rembrandt was discredited and financially ruined. But the painter was undiverted



FIG. 316.—REMBRANDT. THE SYNDICS. RYKS MUSEUM, AMSTERDAM.

from his search for reality by this fury of the butchers and bakers who would dictate the style and manner of the artist. Still, disregarding the petty vanities of those stout burghers who wanted only a flattering likeness, the problem arising from this altercation was a real one. How far should the artist deviate from illustrating the stubborn facts of reality in effecting his image of the world? The problem which confronted Rembrandt appears again in the painting of our own time. For Rembrandt, the dilemma was resolved in a group portrait of the *Syndics* (Fig. 316). With a theme more tractable than the *Night Watch*, that of portraying six persons in a room, he was able to produce a profoundly spiritual

analysis of each personality. At the same time, he maintained the effect of a corporate group in the psychological tension that makes for an intelligible social unit as opposed to a random collection of individuals. The synthesis of the psychological and the material worlds effected in this painting comes about through the integration of color and light with the architectonic divisions of the table and the wall panels. Every spot of light, every tilt of a hat, even the angle of the white starched collars and cuffs, play an organic rôle in producing the final effect.

The abstract language of forms in space, horizontal lines and the pattern of the color with its pulsating tonalities, was used by Rembrandt to produce an effect of reality that goes to the very core of man's being. Fundamentally he employed the language of forms to reveal his spiritual insight into reality. It is significant that though Rembrandt rejected the rhythms and the idiom of the Italian in favor of those of his native Dutch art, he ultimately came to a form-language bordering upon the abstract but not crossing into the purely mathematical and musical sphere of an abstract art—to a type of expression that may be called classic. In his late works the trivial and accidental is burned away, leaving the eternal elements of order, harmony and rhythm, symbols of a mind that found abiding truths in the conflicts of its own spirit. Out of the bewildering chaos of experience, man occasionally forges such symbols of his spiritual life. They are understood with difficulty because they speak to the mind's eye rather than to the physical eye, or rather through the medium of the senses to the formulating and symbolizing function of the mind.

The late pictures possess a peculiarly timeless character. The *Bathsheba*, a detail of which is represented in Fig. 317, is no more specifically Dutch than Michelangelo's Jeremiah is Italian. In this woman of the Old Testament, there is expressed, it seems, every impulse to which the image of woman has ever given expression—the Venus of olden times, the Eve and the Virgin and Mother of the Middle Ages, the instrument through which from generation to generation the stream of life flows. In the sphere of religious painting, Rembrandt produced hundreds of illustrations of the Biblical texts, pictures whose purpose and nature differ from all the devotional altarpieces and decorative murals of the past. In each theme, he illustrated with consummate understanding its human significance rather than its hieratic or symbolic

implications. The story of the *Good Samaritan* (Fig. 318) is dramatized in every detail. The Samaritan is seen stopping at nightfall in the court of an inn. While the boys and servants at-



FIG. 317.—REMBRANDT. BATHSHEBA. DETAIL. LOUVRE, PARIS.

tend to the wounded man, he confers with the hostess about the case of the unfortunate traveller he has befriended. The story is told for the kernel of compassion which animates the simple Bible tale. Tenderness of the strong for the weak has never been so



FIG. 318.—REMBRANDT. THE GOOD SAMARITAN, LOUVRE, PARIS.

touchingly portrayed. A glance is sufficient to inform the observer of the whole complex movement. The head of the Samaritan turning to indicate his charge, the inquisitive peering of the boy toward him, the people looking out of the windows—all organized so that the drama is more pathetically moving than it would be were we to behold the event with our own eyes. The well-head and the rope center attention upon the sick man, the very contours of the architecture assist in the articulation of the drama. It is the quality of mercy and compassion that is the subject of the painting, abstractions that lie implicit in the behavior of the characters. The greatness of Rembrandt lay in his capacity of conveying through realistic images their underlying human significance.

As an etcher, Rembrandt is unrivalled, and his prints share an equal place with his painting. Etching was an almost unknown medium when he began, but he made it into a subtle and flexible instrument of expression. He recognized the peculiar scope of the abstract black and white print and never confused its technique with that of painting. It is notable that in his drawings, his sketches and his etchings some of the master's most intimate observations and experiences are recorded.

The etching *The Fall of Man* (Fig. 319) shows with what power Rembrandt endowed his prints. The picture sparkles with the contrasts of every shade from black to white. The two innocents are seen on a hill with a spacious view in which only an elephant is visible of all the animals of Paradise. Enframed by the trees and rocks, the human figures are the focal point of attention. The subject is one expounded by many masters since medieval times, yet Rembrandt gave it a treatment differing from any of the traditional interpretations. He saw the theme not so much as an episode in the Christian mythology but as a study of primitive mentality. The primeval parents of humanity are not god-like creatures, sole rulers of the world; they are simple and child-like in their ignorance, knowing only their native impulses and the one forbidden act which makes them human. The psychological differences between man and woman suggested by the Italians are here accentuated, Eve all eagerness to devour the fruit and Adam restraining her. This drama of the Fall is reminiscent of Milton's version in *Paradise Lost* (written about the same time) in its deep understanding of human nature.

It is interesting to compare this thoroughly naturalistic treatment of the legend with that of the Romanesque period (Fig. 185). Characteristically, the medieval sculptor at Hildesheim related the episode in a series of panels, all of which are required to tell the story fully. The modern artist, while he is no more graphic in representing typical action, was able to condense the



FIG. 319.—REMBRANDT. THE FALL OF MAN. ETCHING. MUSEUM OF FINE ARTS, BOSTON.

episode into a single composition expressive of the completed drama. This condensation was made possible through the complexity of the realistically portrayed setting and the elaborate analysis of human behavior. One becomes aware imaginatively not only of the immediately presented acts, but those that preceded and those that inevitably followed them. This condensation of pictorial style is possible only when the eye has been disciplined to great subtlety of pictorial representation and cannot appear in pre-naturalistic art such as the Greek or the Romanesque. Broad human under-

standing was essential to it, such as could only have existed during or after the Renaissance.

Of the masters who followed the leadership of Rembrandt or were indirectly influenced by him, Jan Vermeer (1632-75) was the greatest. More limited in the world that he encompassed than the older master, he became something of a specialist in simple room interiors. Whereas Rembrandt founded his illumination upon an infinitely deep golden *chiaroscuro*, Vermeer cleared his palette of all heavy tones with the result that his pictures have an amazingly light quality of clear rich color. Not until the Impressionists appear in France is there any painting that catches so brilliantly the swift and subtle play of clear daylight. So intensely vivid is the drama of light and space in his paintings that one's imagination is held enthralled by it. The subject-matter, as in the picture called *The Necklace* (Fig. 320), is almost always entirely trivial. There is not the profound study of personality that is found in Rembrandt's work, or even in Hals' but only a luminous atmosphere that flows through the room. The design of his picture, which seems like a happy chance, is actually the result of an elaborate study of the interrelationships of balanced form in space. As with all baroque masters, space had an especially powerful appeal for Vermeer. Unlike Rembrandt's dynamically pulsating space, his is bounded and controlled. His interiors are miracles of lucid space patterns which have a dramatic intensity of their own, arising from forms luminously saturated with color and arranged in an almost mathematical scheme of logical relationships.

While the Dutch school of painting was relatively free from any direct influence of the Italian Renaissance, El Greco (1541-1614), the first of the great painters in Spain, was profoundly influenced by Italy. Born a Greek on the island of Crete, he studied with Titian and Tintoretto in Venice. His early works bear the closest resemblance to typical Venetian painting, being especially linked with Tintoretto's style. In his adopted Spain his style underwent a radical change. The break-up of the High Renaissance style with its sculptural poise and equilibrium, its static space compositions, appears in the art of Tintoretto. With El Greco, the transition to the baroque style is complete. As in Rubens and Rembrandt, the space patterns are infinitely complex; the

dramatic play of light becomes a primary element in their composition. In the *Nativity* (Fig. 321), supernatural light emanating from the Holy Child flashes from object to object like quiet light-



FIG. 320.—VERMEER. THE NECKLACE. KAISER FRIEDRICH MUSEUM, BERLIN.

ning. The leaping movement of the light is echoed in the ecstatic gestures of the shepherds, who rapturously express their wonder and adoration. Here there is nothing of the sober matter of factness of the Dutch, nor the grandiose spectacle of Rubens. It is an imaginative translation of a miracle into the articulate language



(Courtesy the Metropolitan Museum)

FIG. 321.—EL GRECO, THE NATIVITY. METROPOLITAN MUSEUM, N. Y.

of color, space and movement. The Church, seeking through the Counter-Reformation to maintain its authority, found in El Greco and other baroque artists the means to declare the verities of the miracles that were being discredited by the humanists and the scientists. But a miracle that is described in language of color and design is a miracle explained in concrete terms and therefore destroyed as an authentic manifestation of the supernatural. The significance of El Greco's art lies in his capacity to



(Courtesy the Metropolitan
Museum)

FIG. 322.—EL GRECO. CARDINAL
GUEVARA. METROPOLITAN MU-
SEUM, N. Y.

abstract the rhythms of fluid light — the emotion-arousing color, the nervous tempo of moving bodies. These rhythms he combined in incredibly beautiful arabesques that are to the highest degree symbols of human spiritual and emotional experience.

Like all the baroque masters, El Greco was a great observer of Nature. The elongated forms and the distortions of his later art arose from a knowledge that things seen have in themselves no meaning until imagination plays upon them, until they are translated into intelligible patterns of experience. His capacity to see objectively is nowhere better demonstrated than in his portrait of *Cardinal Guevara* (Fig. 322), the prosecutor of the Spanish Inquisition. No master has ever excelled El

Greco in the painting of the intricate lace against the rich luster of silk. But he goes beyond the casual objective facts to observe the nervous gestures of the Cardinal seated on the edge of his chair, the active hands that are studiously idle, the alert erect head. The face is a study in arrested energy. The wide hard mouth is devoid of pity or compassion of any kind; the cold eyes stare through thick lenses. Ruthless zeal and cruel fanaticism were never so pitilessly laid bare. More than a portrait of an individual, this is

a portrait of the Inquisition. As a painter of the spiritual history of his time, El Greco is rivalled only by Rembrandt.

The portrait and the landscape are two forms of painting upon which the baroque masters lavished their best efforts. At a time when life was being reoriented toward a new naturalistic syn-



(Courtesy the Metropolitan Museum)

FIG. 323.—EL GRECO. VIEW OF TOLEDO. METROPOLITAN MUSEUM, N. Y.

thesis, the artist searchingly scanned the human face as though in recognition of the active rôle the individual was assuming in the shaping of his own destiny. In the Middle Ages the portrait was all but unknown, since the individual was looked upon as

an insignificant unit of a hierarchy at whose head stood the Deity. In the Renaissance the portrait made its appearance as soon as the individual asserted himself as a creative agent in the moulding of his world. In landscape one finds an objectification of the portrait, that is to say, it becomes a portrait of the artist's personality. Though the minor Dutch masters gave a factual account of its physical features even as they rendered with simple directness the pots and pans of their kitchens, Rembrandt made it a vehicle for his waves of undulating color harmony. The fields and forests of Rubens are as sensuous and living as his female nudes. For each, the actual scene was transformed by the imagination according to what the painter found of his own consciousness reflected in it. Such a landscape is El Greco's *View of Toledo* (Fig. 323). The flashing crest of buildings that follows the rolling hills is silver against deep green shot with black. The sky oppressed with ominous clouds seems bursting explosively with blinding light which transforms the world into nightmare. It is a scene pregnant with awful foreboding. Actually Toledo is a city of dead grey stone lodged on the bare granite hills, so arid and drenched by the blazing sun that only a few olive trees relieve the stark monotony of its drabness. But through El Greco's eyes, it becomes more than a dusty provincial hill town; it is the scene of a passionate endeavor to wrest from the dying Middle Ages an organic conception of the new world.

In the older accounts of painting, the name of El Greco is barely mentioned and often omitted, because his vision of what is real did not concern itself with the superficial surfaces of things; his forms were not arranged in the conventional patterns of the older art. It was even believed that his strange visions resulted from defective eyesight. With the appearance of the Post-Impressionists late in the 19th century El Greco has been understood and appreciated for the mystic and seer that he was. Perhaps the failure of people for almost three hundred years to understand Greco's immensely stirring art is explained by the appearance in the same century of a Spanish master who recorded with consummate genius all the intricacies of light and color playing over the forms that stood before him, and little else. Never has painter shown a greater mastery over the technical means of his art than Velasquez (1599-1660).

Where El Greco saw miracles, the triumph of the Cross, the

spiritual agony of Hell and the ecstatic visions of Heaven, Velasquez' sober eye encompassed strolling musicians, beggars, peasants eating their noonday meal of cheese and wine. An aristocratic counterpart of the contemporary Dutch masters, he could not force himself to moral, philosophical or religious abstractions. When he painted mythological subjects, such as Apollo appearing at the forge of Vulcan, the theme alone belonged to antiquity; Velasquez attempted only to paint realistically a semi-nude youth standing in a blacksmith's shop addressing a muscular blacksmith. His mind did not leap to the literary past for an interpretation. His religious paintings are but nominally religious, for he was incapable of clothing sacred legends with the imagination of El Greco or the tender humanism of Rembrandt. As empirical as the scientists of his time, he could only paint what he saw. But that is enough, for no painter ever had his sensibilities of vision, his capacity to see the nuances of color and light, and the fluid sequence of space that results from harmonious blending of the forms in atmosphere.

On a visit to Rome, Velasquez painted a portrait of *Innocent X* (Fig. 324). His approach to the subject was not like El Greco's, who set out to reveal the innermost soul of Cardinal Guevara (Fig. 322) through analysis and interpretation. It is as though Velasquez had walked into the presence of the Pope, painted impersonally the image before his eyes and stopped with that. One feels that no judgment has been made, no intervention of a conscious mind between the subject and the canvas. One seems to be in the very physical presence of the shrewd and crafty Innocent X. The story that the Pope was displeased with so objective a scrutiny of his countenance may well be credited, for Velasquez recorded not the majesty of the head of Christendom, not the spiritual leader of the Church, but the lowering scowl on a face, and shimmering silk and lace. The texture of the moist skin, the vibrating whites and crimson of the silk, the hand casting a luminous shadow on the white fabric—these are the things that Velasquez painted. But it is apparent that he did not paint scrupulously minute details as the 15th century Flemish masters did. Fully aware that the eye sees only salient accents, Velasquez painted those accents, leaving the details blurred and rendering them as tone masses. The treatment of the lace is a point in question. A collar or sleeve is represented as a spot of white blending

with other spots to form the characteristic pattern made by the ensemble. In such an impressionistic view, all suggestion of the sculpturesque and statuesque is gone. Even the spacing within the frame differs from that employed by artists of the previous century. The casual placing of the figure off center, the seemingly accidental exclusion of the lower part of the chair and the figure, gives an amplitude to the space and an informal effect that char-



FIG. 324.—VELASQUEZ, INNOCENT X, DORIA GALLERY, ROME.

acterizes the Baroque wherever it is found. It is from such compositional factors that the freshness and reality of the subject is realized.

In Rome, Velasquez painted his first landscapes. They, too, are faithful records of sunlight filtering through trees and reducing architecture and figures to a spotty arabesque. For the first time, direct observations were made and veraciously recorded in paint, of the effects of light and atmosphere. One might easily mistake them for the studies of those specialists in painting sunlight, the Impressionists of 19th century France. These were random

and casual pictures, soon forgotten in the master's absorption in interiors. Realizing the inability of pigment to attain the absolute scale of light, Velasquez turned to the half and quarter lights,



FIG. 325.—VELASQUEZ. THE MAIDS OF HONOR. PRADO, MADRID.

the fugitive tones and silvery shadows that existed in the indirect illumination of interiors. We have observed repeatedly the baroque painters' special predilection for the rendering of space, in Rembrandt, Vermeer, Rubens, El Greco. Velasquez sensed

space as something dynamic and living, arising from the mixing and blending of tonal values. In the *Maids of Honor* (Fig. 325), this sense attains a highly poetic expression. The subject of the painting is so involved as to require some explanation. The King and Queen, just visible in the mirror in the background, look into a room where Velasquez as the official court painter is standing before a huge easel whose straight accent sets the limit of the scene. In the foreground near the painter are various members of the court, a little princess, clothed in the absurdly grotesque fashion of the time, attended by two maids from whom the title of the picture is oddly enough derived. Among several others is a dwarf, a pathetic creature kept like a pet animal to amuse and flatter the vanities of the royal household. The room itself is described with mathematical exactness; the rapidly foreshortened wall at the right converges with the rear wall and the ceiling. The pictures, the mirror and the door frame break up the rear wall into a series of rectangles. The easel is a positive barrier obscuring from view the remainder of the room. The play of atmosphere, the uneven illumination and the variety of colors blended through air and distance exclude any feeling of rigidity or hardness from this cubic frame. More than anything else, the space is given infinite flexibility through its rhythmic treatment and its complexity. The figure of Velasquez himself looks outward into undefined space where imaginatively the spectator stands. The observers (in this case the King and Queen) give reality to that space by being shown in the mirror, thus doubling the distance represented. Further elaboration results when the eye, making a sudden leap from the figures close at hand, observes through the open door a series of steps upon which a courtier stands looking back through the tangible space toward the court scene. The spontaneous movement of the figures within this fluid space gives it final verification. The interrelation of lines converging in depth and varying hues of surface make for a closely integrated pattern of the greatest subtlety.

If there is such a thing, Velasquez is the painter's painter. For him the meaning of painting lay in making his scene articulate through observation of continuous patterns of color and light and space. The identification of the object he painted seems almost a by-product of his observation of the continuity of a pattern that embraces all. In this respect he is close to Vermeer, at moments

to Rembrandt and especially to Poussin. In certain canvases of these men, the created world is all-sufficient, a microcosm closed and complete, like little worlds in which the tension, the drama and tumult of the actual universe are resolved into the harmonious music of form and color. A conception of unity and harmony, such as that which Christianity had given the world spiritually in the 13th century, obsessed the minds of these baroque masters, who thought to realize a comprehensive unity through rationalistic and intellectual means. In spheres outside of art, it was sought in the moral and esthetic Neo-Platonism of Shaftesbury in England, in the absolute monarchy of Louis XIV in France, in the philosophical systems of Leibnitz and Spinoza and in the absolutism of the Counter-Reformation and the Jesuit movement. If, indeed, all ages have directly or indirectly searched for the basic harmonies, the ultimate unity of the world, the images of this harmony evolved by the 17th century are peculiarly articulate and complete. No artists in following centuries succeeded in evolving a synthesis approaching them in universality, except the musicians Bach (so close in spirit to the 17th century) and Beethoven.

Order and rhythm may be regarded as ultimate realities. If experience has these qualities, we regard it as intelligible. If the phenomena of the natural world recur with order and rhythm, they are incorporated in Science. In human society, an integrated culture emerges from a consecutive and consistent pattern of conduct. (It was the qualities of continuity and order that Nicolas Poussin (1594-1665) found most convincingly expressed in classic art and in the painting of the High Renaissance in Italy. Like so many Frenchmen before and of his own time, he went as a student to Italy, since he lacked competent masters in his own country. His mind, impregnated with the classic harmonies of Raphael's art and the ancient architecture and sculpture of Rome, shaped his style in accordance with them. Drawing inspiration from those sources, he moulded clear and statuesque forms (Fig. 326), lucidly articulated nude or draped figures, clarified by the light that shapes them. The grandiose figure composition with its sweeping silhouettes finds its origin in Raphael's style. Only recently, a voluble critic has charged this greatest of French masters with decadence and decay, asserting that he was content with mulling over the carcass of the artistic past to obtain petty correctness and smug perfections. Such an astigmatic view of Poussin fails to see

him in relation to the French genius and the spiritual needs of his time. France had experienced, in the Gothic 13th century, a sublime synthesis of thought, a moment when perfect equilibrium had been established in the chaos of experience by a pattern of life that gave direction and meaning to it. Now, in the 17th century, with the unconscious knowledge of the Gothic past and a more conscious recognition of the ancient synthesis of antiquity, her artists were striving for a symbol of unity involving the present and the past.

Had Poussin been simply a romantic antiquarian escaping from modern perplexities in ransacking the past, his art would not be worth the canvas it is painted on. But he was no dull pedantic antiquarian, for he went to the past with the same inquiring mind that took Donatello and Michelangelo, to see and learn from it what might be used to inform his own original vision. What chiefly distinguishes Poussin's canvases from the work of Renaissance masters is the involved space effects beside which the Renaissance pictures appear like low relief sculptures translated into colored surfaces. The rhythms of the *Massacre of the Innocents* (Fig. 326) are not confined to the surface pattern but are projected into an illusionistic depth. Sharp contrasts of strong light against dark, as in the figure of the baby and the contour of the struggling mother's arm, strike out arresting three-dimensional patterns of movement in space. The sense of immeasurable space that had been achieved emotionally in Gothic architecture, and had haunted all the painters since the Middle Ages, found expression again in the baroque age. In Poussin's work, it is integrated and reconciled with the classic conception of mass—the sculptured solid. But the solids and masses of his figures are modified by the pulsating stirrings of color which render them instinct with an emotive vitality. From Titian, Poussin had learned how color brings to life the organism lying beneath the smooth flesh surfaces; how it impregnates the atmosphere with vibrating movement as Velasquez and Rembrandt knew so well. Paradoxical as it may seem in view of the sculptural quality of Poussin's figures, their vitality depends largely upon the colorism through which he rendered mobile the plastic sculptural design. Because pedants and academicians apotheosized Poussin's linear and sculptural design to the exclusion of his color, and because the great body of his work in the Louvre has been covered for centuries with dust and

grime, few observers are aware of the blazing splendor of his color. Only in his finished paintings did he stress the sculpturally intact fullness of his figures. One must look to his drawings and studies to realize fully how basically baroque was his feeling for space and for light and their use in the formation of his design. In the sketches he noted with broad strokes of pen or sepia brush



FIG. 326.—POUSSIN. MASSACRE OF THE INNOCENTS. MUSÉE CONDÉ,
(065110)

the essential character of a movement in spots of light and dark. His brevity and sureness are matchless in condensation. When he committed the sketched design by oils to canvas, he filled it with glowing colors of great richness and density, effecting a composition of incomparable amplitude and depth.

There will be noted in his *Massacre of the Innocents* (Fig. 326) a deliberate rhetorical quality, even when the action is as swift and vicious as that of a Roman soldier murdering a child of

Judea. It is especially evident in the studied gesture of a mother who flees the scene of carnage with her child; her step is firm and measured, her raised hand not too eloquent of her terror. In the preparatory drawings for this picture, these slow rhetorical measures are not found. The action is swift, the emotion awful in its intensity. Poussin was a finished master of illustration, yet in his painting he consciously suppressed the narrative and episodic, and cooled the tempo of the vivid spirited action. All is subordinated to the rhythm of the total design; the movement of the flying mother correlated with the sweeping gestures of the struggling woman. All forms must lie harmoniously within the compact rectangle of the frame. The individual emotion must become one with the integrated harmony of the complex. The first rule of Poussin's art is lawfulness, conformity to abstract law that renders intelligible even the savage passion of men who slaughter infants.

In landscape painting, Poussin is linked unambiguously with the prevailing baroque tendencies. Here was a field in which he parted company with the High Renaissance, for even Raphael who was very responsive to landscape had, in accordance with the style of the time, subordinated it to the rôle of background for a Holy Family or an Entombment. Poussin still felt the necessity of including some Biblical tale or antique legend in his landscape, but he suppressed the figures almost to the vanishing point. In the *St. Matthew and the Angel* (Fig. 327), they give a title to the picture and serve to give scale to the distance. As in his figure pictures, the landscape conforms to a logical order. In one respect, his landscapes are arranged, formalized and artificial. They are always some view of the Italian country-side, with classical ruins and pastoral shepherds of antiquity. As Breughel in his pictures (Fig. 306) had composed his landscapes with reference to the activity of peasants who create it, Poussin conceived his as balanced and articulate patterns of space and mass. Like an architect, he controls the space as though it were enclosed within the walls of a room. In the composition cited above, the tower of the distant ruin on the horizon line is structurally coordinated with the small figure of St. Matthew and the angel; the eye takes in with a glance the pyramidal relationship of the blocks and broken columns, forming with the human group a large triangle of forms. The composition falls into two parts, the diagonal accents extending from the opposing corners dividing it and redividing it

with almost mathematical exactitude. Reduced thus to a complex of interrelated triangles, the space and forms are represented with the utmost clarity. As the eye is induced through Poussin's cunning to explore the space, the senses expand with the unbroken sequences of commensurate volumes. The mysterious flight into space that captured the minds of the 13th century in Gothic architecture now obsessed Poussin. It acts upon the senses like an opiate



FIG. 327.—POUSSIN. ST. MATTHEW AND THE ANGEL. KAISER
FRIEDRICH MUSEUM, BERLIN.

which makes one suddenly aware of relationships and abstract qualities never realized before.

The will and the power to abstract were very great in Poussin. He always avoided the accidental and the unexpected; instead of painting *a* landscape he painted *the* landscape. And in his picture is the characteristic of all landscape—namely space rendered poignantly sensible through order and rhythm. His religious and classic paintings derive their authenticity from a sense of form and continuity older than the Hebrews and the heroes of Troy.

Poussin's friend and fellow-expatriot in Rome was Claude Lorrain (1600-82); together they form the background of all

French painting since the 17th century. Of the two, Poussin was the scholar, the intellectual and philosopher. Claude Lorrain was none of these; rather he was the lyric poet of Nature, with a rare intuition for expressing immediate sensation. The tiniest fragment of a Roman sculpture, a broken Corinthian capital, was of the most vital interest to Poussin, but the things that took the eye of Claude were the direct experiences of Nature, the light from the river, the wan lemon hues of early dawn, and dissolving foliage against the light. Simple in taste, he knew nothing of heroic striving for absolutes, and cared nothing about them. While Poussin was engrossed in the art and literature of antiquity, Claude was cultivating the friendship of certain Dutch and German landscape painters living in Rome, for landscape was the only subject that interested him. In certain externals, his pictures are like Poussin's, in their largeness of view involving grand vistas, picturesque ancient ruins, incidental figures of Biblical or classical derivation. Though Claude cared not a whit for the figures, tradition demanded some element of narration or edifying drama, so he dutifully tucked into his compositions a few harmless shepherds or Biblical persons, calling this landscape a Flight into Egypt, and that one the Marriage of Isaac and Rebecca. He thought little of these incidentals and used to say, "I give my figures away but I sell my landscapes." Often enough, he permitted a hack assistant to paint them into his finished scene. For Poussin, such a procedure would have utterly destroyed the underlying significance of his grand architectonic design. Yet Lorrain's landscapes have much the same ordered dignity of Poussin's, a formality that has given rise to the term *heroic* landscape to distinguish them from the *intimate* landscapes representing fragments of meadow or forest popularized by the Barbizon school in France of the 19th century.

Claude builds up his scene usually according to an established formula consisting in a rather detailed foreground, flanked at the sides by imposing masses of trees, through which one looks into deep luminous distance. The movement of the light emanating from the opaque sky caressing the hills, gleaming from water and piercing the foliage of the trees is the life of these dramatic landscapes. Where Poussin's are static and classical, Lorrain's are more romantic with their appeal to the emotions by movement and warm colors. Lorrain adhered only nominally to the classic sense

of order and balance, but this discipline gives special point to the emotive elements of color and movement.

The theme he liked most to paint was such a one as that of the *Harbor Scene* (Fig. 328). A simple bit of analysis will indicate how greatly Lorrain was indebted to Poussin for the compositional elements of his pictures. If lines are drawn from opposite corners of the above painting, it will be seen that the composition falls



FIG. 328.—CLAUDE LORRAIN. HARBOR SCENE. LOUVRE, PARIS.

into the four triangles. The triangles converge at a point far in the central distance, effecting a pyramid of space, the apex of which is the source of illumination. The rising sun acts as a magnet towards which the trees bend and the very architecture inclines. If the lines of the cornice, the balustrade and even the accents in the pavement be projected, they will terminate in the golden light that flows back, tipping the crest of the ripples and rounding the smooth columns of the temples. Lorrain had no philosophical understanding of the classic tradition but he used it with tact and intelligence as an instrument to express his abundant

pantheistic naturalism. Deriving his experience from a continuous contact with nature, he reduced his impressions to patterns so lyrically expressive of its inner life as to rival the subtlest design of the Chinese masters. As an intuitive poet of nature, he has no equal in European landscape painting. His influence upon Watteau and Corot in France, upon Turner in England and nearly every subsequent landscapist is incalculable.

PAINTING IN THE EIGHTEENTH CENTURY

THE 17th century in France is characterized by the absolutism of the monarchy, which, under Louis XIV, was conceived to give order and direction to life, the hierarchy of state being an intellectual machine functioning with precision and determining authoritatively all human activity. Art came under the State's authority when Colbert founded an official academy of sculpture and painting in 1648 with a monastic-like school in Rome. The government assumed a monopoly of all art instruction, free schools being forbidden. The implication that artistic expression could be regimentalized and forced into the strict confines of the Italian classic mould was in keeping with the French intellectualized ideal. Imposing a rigid and static form upon a living organism results inevitably in its death. The primary law of Art, as of Nature, is growth. The ideals of the Academy were briefly to foster a uniformly heroic art, based upon the proportions of the antique, expressing noble patriotic and religious sentiments abstractly. The subordination of color to form shows how little understanding the pedants of the Academy had of Poussin's art, the acknowledged model of the Academicians.

It was assumed by the Academicians that Art consisted in a body of knowledge mastered by the ancients, and that this knowledge might be learned by the gifted student. All advancement, rewards and honors for the artist were based upon rigid examinations, administered and judged by the closed corporation of the Academy. Conformity to outmoded styles was placed at a premium and any originality was looked upon as heresy. Such a view of Art grows out of the assumption that Nature is static and that every expression of it can be regulated through the machinery of the State, which thus assumed final and authoritative control of all human activity, religious, artistic, ethical and philosophical. Such a dream emanated from a desire for certainty, for a pattern of life intellectually contrived that would free it of chaotic violence. The unity that had been realized in medieval times through Chris-

tianity was sought in 17th century France through the intellectual ideal of a mechanism of state symbolized by the supremacy of Louis XIV. His famous utterance, "*L'Etat, c'est moi*," indicates how thoroughly conscious the system was. This deification of the office of the King, a static symbol of an organic society, was an ultra-rationalistic gesture, a declaration of a program based on authority without adequate scrutiny of the nature of the society to be regulated nor the adequacy of the authority to regulate it.

The official sanction of classic art by the Academy had a tremendous influence upon the public taste in art, extending to our own times. Carried to its logical conclusion, its program authorized a type of art that was dead at birth. It was based, it is true, on the art of Phidias, of Raphael, of Poussin, but these had been created in response to the intellectual, moral and social phenomena of fifth century Athens, of 16th century Italy, and 17th century France. The ways of understanding the world revealed by them were unique. To try to recapture in painting their image of the world is and always has been futile, since the world differs from century to century as men interpret it differently. The artists who adhered to the dogmas of the Academy could not do this for in the main, they repeated dreary correct formulas taught by the pedants. The main stream of art since its founding consists largely in the work of masters who early in their careers abandoned set formulas for a style formed upon their instinctive feeling for design that would express the life rhythms of their own age. The docile and the weak lean heavily upon official authority, while the strong and original rely only upon the authority of their own feeling and intelligence.

It is interesting to observe that the first outstanding master after Poussin's time did not derive from the official Academy but from the Dutch and Flemish. Antoine Watteau (1683-1721), the greatest master of the 18th century, came from a Flemish province that was annexed by France a few years after his birth. He was the first great painter in modern times to develop within the boundaries of his own country, and for that reason may be called the founder of the French school. Deprived of the benefits of official recognition, he lived in poverty, conscious of the artificial world of play-acting to which he did not belong. Polite society constrained under the Monarchy and Regency to the ritual and routine of absolutism, based its pleasures, its fashions and manners on

the model of the artificial life established by the court. The masked ball, the company of Italian players, the garden party, appear again and again in Watteau's canvases. With a detached air, he observed the gay company that made love and music as though they were the end of all desire. A society, isolated by a government that reduced human intercourse through its fixed mechanism to a game of intrigue and strategy, found its expression in every form of graceful amorous play. Wealth and power, concentrated at the court and spreading to the thin layer of the privileged few who lived through its favors, created a society founded on leisure and elegance. The *divertissement* of this aristocratic society, Watteau took for his special subject. The theme of festive love-making had engaged the imagination of the northern artists from medieval times. It is found in early German woodcuts and engravings. Dürer had represented the lusty dance of the peasant; Breughel had painted the wedding party, the Kermesse of village folk. Rubens particularly had often been absorbed by the wild orgy of the dionysiac revel through which he expressed the passions of men and women drunk with wine and lust. Even Poussin had repeatedly painted the subject of the drunken feast of Bacchus with penetrating insight into its significance as a symbol of renewal.

But Watteau, unlike the classicist Poussin, went to the Fleming Rubens, to his dynamic life rhythms, his inexpressibly living orchestrations of color. He made dozens of drawings from Rubens' pictures. There is scarcely a figure of Watteau that may not be found in some drawing or painting of the Flemish master. Watteau's greatest painting, the *Embarkation for the Island of Cythera* (Fig. 329) is directly inspired by such paintings of Rubens as the *Garden of Love* (Fig. 310). The refinement of love in this treatment of the theme by Rubens appealed to the sensibilities of Watteau, as it more nearly approximated the languorous festivals of his age than the violent frenzy of the Bacchic dance usually portrayed by the Flemish painter. The robust types of Rubens were changed by Watteau to slight graceful French forms, but the mood is the same and the fanciful setting is similar, with the ambient atmosphere of the park, opening into the depths of a misty expanse. The winged loves and the garden sculptures of the Venus as the presiding deity of the festival appear in both. But Watteau refined the gleaming silks, made the passage from color to color more subtle, the movements more graceful and har-

monious. His festival of love belongs wholly to the dream world of the imagination whereas Rubens' touches actuality in the veracious portraits, the solid tangible baroque architecture and the substantiality of a hundred realistic details. The episode Watteau illustrated, the departure of the felicitous ones for the island of eternal love, is itself a phantasy, a dream of lovers fleeing from the constraints of the real world in a golden barque with gauzy sails into the pearly mist of eternal joy. The winged cherubs



FIG. 329.—WATTEAU. EMBARKATION FOR THE ISLAND OF CYTHERA. PALACE, POTSDAM.

urge the reluctant or swing in flowery circles about the golden mast. All movement is from the shady grove where lovers sit toward the gleaming promise of bliss. The lovers move as in a dance through varying stages from reluctant hesitation in the seated figures to acquiescence in the rising ones, culminating in the languid anticipation of the pair moving down the path. Though lovers, barque and landscape are spun of the imagination, the mood of yearning that is evoked is none the less real.

No master in all European art painted with greater feeling for delicate nuances of color and line than Watteau. His smallest drawing (Fig. 330) is alive with movement wonderfully harmonized with the form it stirs; every stroke of the brush or

crayon is a caress waking to life the rounded shoulders and the extended arm. His colors, softened as with liquid silver, vibrate and fuse with the atmosphere. The drawing of Rubens and the color of Venice and of Flanders converge in Watteau to form exquisite new rhythms and harmonies. He seems to paint as the bird flies, on the pinion of instinct and feeling. He composes no epic dramas of life like Poussin and Rubens, but lyrical interpretative songs, fashioned from the bloom of light and gliding forms. As though he were conscious of his early death and the tragic fragility of love, an expression of infinite melancholy pervades his work. With an insight into the spiritual decadence of society of his time, he seems almost prophetic of its destiny.

Something of Watteau's melancholy and abstraction is found in the painting of Thomas Gainsborough (1727-88) in England. Through Van Dyck, the Flemish tradition had been introduced in England and sympathetically accepted for its decorative charm and facility in expressing the fugitive aspects of personality whose recording is the sphere of portraiture. Abstract and decorative paint-

ing served the English to adorn life, not to interpret it. It gravitates around the peerage for which it exists to expound the beauty of its gardens and women. From the French Watteau and the Flemish Van Dyck, Gainsborough conceived the decorative light, the evaporating color with which he fashioned the fabric of such a work as *The Portrait of a Child* (Fig. 331). In the fugitive shadows, the indistinct luminous background, the captive spirit of a child or a charming woman escapes into the imaginative world to maintain there a secret indwelling life. But in the main, painting in England was the leisurely occupation of the gentleman and amateur, a darling of the aristocracy. By the 18th century, English music was declining, and painting, transported from



FIG. 330. WATTEAU. DRAWING. LOUVRE, PARIS.

the continent, flourished largely as an exotic adornment of a class. England expressed her greatest thought through her revolutionary poets rather than through her painters, the greatest of whom are often moralistic and sentimental. Perhaps her greatest painter is Hogarth, but he belongs to a tradition foreign to the decorative style of Watteau and Gainsborough.

The style of Watteau dominates French painting of the century. Through the authority of his art, the official style of the



FIG. 331.—GAINSBOROUGH. PORTRAIT OF A CHILD. DETAIL. NATIONAL GALLERY, LONDON.

Academy grudgingly expanded to include elements of his decoration. His imitators Pater and Lancret ably maintained his style but without the master's inimitable tragic sentiment. The nimble mind of Honoré Fragonard (1732-1806), enriched by extensive studies in Italy, gave the most original interpretation of Watteau. The theme of love was freely treated by him to make gallant scherzos, erotic episodes of stolen kisses and witty furtive adventures. His brilliant mind shaped countless intriguing designs with amazing skill and vivacity. Witty, salacious and tactful, he and Boucher exploited the foibles of a

decade that was drifting constantly closer to the cataract of the Revolution. Typical of his work is *The Swing* (Fig. 332). In a theatrical park, in which the trees appear freshly powdered, a lover is swinging his lady, while a gallant hides in the bush to observe her dismay. The picture is characteristic of the pleasure-loving taste of the times, though certainly not the painter's finest work. With Boucher, the Franco-Flemish tradition which finds its highest expression in Watteau degenerated into voluptuous interior decoration. But let it be said that despite his somewhat tedious preoccupation with erotic themes Boucher was a brilliant deco-

rator and should be considered a craftsman-designer of exquisite talents rather than an artist of creative depth. He was one of a swarm of artists who fashioned baubles for the parasitic world of society that could only repeat itself in endless play upon the theme of love gone stale, demanding more novel and exciting reflections of itself in art.

In the painting of the 18th century, only one spirit was to express the world of the common man, the simple truths of his heart and hand. Chardin (1699-1779), a humble painter entirely divorced from the fashionable world, exhibited his tiny canvases in a free stall of an open-air display. Impressed by the Dutch still life painting, he chose to paint only the most familiar objects, bunches of vegetables on a table, intimate homely utensils of his own narrow kitchen. An honest workman, he painted slowly and with scrupulous application. For Chardin, realities were the things he could touch and taste and smell (Fig. 333), a bun beside a sugar bowl, a bottle of wine—to these he brought a feeling for their familiar qualities and a sensibility quick to appreciate the moist flaky crust of the pastry, the hard glaze of the porcelain bowl, the bloom of the fruit.

With a sober naïve eye, he saw the texture of common things, the slime of the newly-caught fish, the transparent lustre of a bowl of eggs ready for the beating ladle, the pearly gleam of onions. The atmosphere that surrounds his inanimate objects vibrates with reflected light so that at a distance a single unified vision arises like the effect of a direct experience of the eye. Nor is there any trick of illusionism involved, since no reproduction however skillful makes one feel the inner radiance, the essential qualities of objects that Chardin painted.

With the same powers of observation for people, he caught

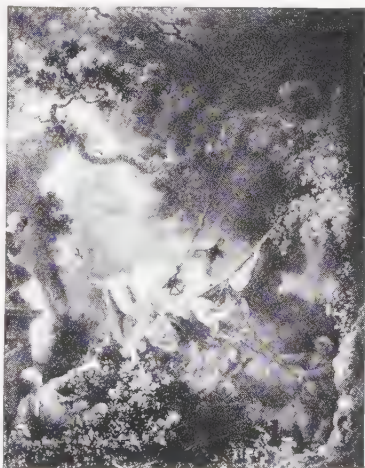


FIG. 332.—FRAGONARD. THE SWING. WALLACE COLLECTION, LONDON.

the intense absorption of children spinning their tops or making a house of cards, the child saying grace with scarcely restrained haste while the mother watches with tolerant humor; all these he painted with marvellous insight into the atmosphere of sentiment that gives each scene its special flavor. A painter who found such a wealth of intimate experience of people and things everywhere close at hand had no need for posturing models. His subjects were the kitchen table with pots and bottles, and his wife and



FIG. 333.—CHARDIN. THE BUN. LOUVRE, PARIS.

children; and they were enough because they were the known realities of his world of sense and sentiment. The *Market Woman* (Fig. 334) stepping into the kitchen with her burden of fragrant newly-baked bread with its powdery crust, the sack of provisions containing a chicken for the Sunday dinner, was a subject to produce from him a design of space and light that becomes a coherent pattern of thought and feeling. In a century characterized by the domination of the intellect over the total experience of mind and body, Chardin stands as one who integrated and oriented his life with sureness and finality. While the philosophic and legalistic minds were desperately striving to attain a balanced and articu-

late conception of life through juggling philosophical abstractions of the Religious Life, the Natural Man, Reason and Law, Chardin was unobtrusively attaining a synthesis without recourse to top-heavy intellectualizations. Unconsciously, he represents the spiritual forces of the submerged middle class that was soon to destroy the machinery of the monarchy which was proving inadequate to administer the affairs of the nation. The fall of the monarchy in 1789 was to have profound reverberations in the development of French art.

The demand of the middle class implicit in Chardin, for a place in the sun, for the very sustenance of life, was proclaimed through the moral philosophy of Jean Jacques Rousseau, who declared that human nature was good, and only the inherent evils of rationalistic institutions corrupted society. In England, the sentimental novels of Richardson were appearing, one of which is a protracted account of the trials and triumphs of a virtuous serving girl. William Hogarth (1697-1764), per-

haps the greatest of English painters, was producing extensive series of engravings and oils dealing with the morals of his day—the evils of gin and the disgraces of fashionable life. The series, *Mariage à la Mode*, concerning fashionable marriage contains a humorous and satiric account of a young wastrel who, upon making a marriage of convenience, passes through varying stages of moral and social disintegration. The episode called *The Countess' Dressing Room* (Fig. 335) depicts the distractions by which his faithless wife seeks relief from the boredom of a loveless union. The vacuous faces of the characters indulging in fashionable amusements of the day are recorded with heartless realism. Hogarth's nationalistic fury over the preference of his countrymen for art of other



FIG. 334.—CHARDIN, THE MARKET-WOMAN. LOUVRE, PARIS.

countries led him to paint two pictures by Italian mannerists on the walls, implying that such pictures were only for the decadent. Art is now taking on the function of criticism and becoming an instrument of social reform. Like a dramatist, the painter realistically interprets the message of reformer and moralist.



FIG. 335.—HOGARTH. THE COUNTESS' DRESSING ROOM. NATIONAL GALLERY, LONDON

In France the sentimental philosophy of Rousseau found a powerful champion in the critic Diderot. He believed that painting should be a kind of graphic literature, expressing moral values. If the picture was in addition beautiful, so much the better, but the chief value lay in the moral that it contained. Diderot found his ideal painter in Jean Baptiste Greuze (1725-1805), the painter of the "picture that tells a story." With syrupy sentiment, he extolled the natural goodness of rustics in detailed dramatic pieces like *The Village Bride* (Fig. 336). The delicate sentiments of Chardin were debased by Greuze to the depths of vulgarity. The domestic virtues of the villagers are laid on with an absurd bathos

The overwhelming popularity of such mawkish, anecdotal painting can only be understood in view of the hunger of a public starved by the trivialities and the insincerities of the fashionable painters who in their own way were just as far removed from reality as Greuze. He appeared to be a spokesman for the inarticulate mass of people that had never been reached by the voluptuous and titillating art of Fragonard and Boucher. In the



FIG. 336.—GREUZE. THE VILLAGE BRIDE. LOUVRE. PARIS.

langorous, half-depraved pretty milkmaids and shepherdesses of Greuze, there was just enough of the voluptuousness of the old art to make them intelligible to all, together with a flattering and obvious morality that met the current demands of popular sentiment. With the Revolution of 1789, his false and ambiguous position was recognized and along with Fragonard and all the aristocratic artists of the century he was discredited.

The French Revolution liquidated the whole class that had dominated art. The style of art changed as radically as the style of government. From the beginning of the century, Watteau had

developed the baroque language of Rubens, giving greater expression to atmosphere, and evolving a freer arrangement with figures of decreased size to produce a more spontaneous pattern of light and space. Fragonard had gone even further in his decorative treatment of color and forms. Chardin, Boucher and Greuze had turned more and more toward the inspiration of the Dutch and Flemish masters of the 17th century, even as Watteau. A vigorous tradition of landscapists among minor painters had flourished during the century, deriving largely from the Netherlands.

Then with the Revolution there appears a man fresh from the Roman Academy who was installed as the art dictator. As a winner of a Prix de Rome, Jacques Louis David (1748-1825) had submitted to the classical training of the Academy. His style had been formed on the models of Poussin, Florentine painting of the High Renaissance and classical sculpture, for no influence of Chardin or Watteau was permitted to taint the minds of students shielded in sterile sanitation by the academic pedants. David brought to Paris one of those elaborate machines promoted by the Academy, a ponderous composition involving a classical subject with sculptural figures. Had the *Oath of the Horatii* (Fig. 337) been brought to light at any other time, it would have caused no comment, but coming as it did on the heels of the Revolution, it was hailed as a symbol of stalwart Republican virtues, fraught with revolutionary implications. The three sons of Horatius, in a triple accent of extended arms and legs, swear to their father to come home with their shields or upon them. Here, it was felt, was a sincerely expressive style dealing with heroic social virtues and free from the gauzy fripperies of the hated aristocratic art. As the art of antiquity had been closely integrated with the state, so now it became a servant of the Revolution and, under the consulship of Napoleon, David became the official state painter.

The ordinary processes of development in painting were brought to a sudden halt by the establishment of David's style as the dominant mode of expression. The *Oath of the Horatii* is cold to the point of frigidity, the dull colors are monotonous and inert, and the light serves only to round the rigid and lifeless contours. The arrangement of the figures against an architectural background, their horizontal spacing in a monumental arrangement, are reminiscent of the Florentine and Roman painting of the High Renaissance. So intent was the painstaking David upon these models

that he disregarded the lessons taught by the baroque painters in the treatment of atmosphere and aerial perspective. He designates each stone in the pavement, every sandal strap, with exactitude. The garment folds seem literal transcriptions of sculptural forms. This very minuteness and clarity made his art the more acceptable to a military caste that demanded a symbol of itself dignified by history and legend. Similarly in our own country, classical forms



FIG. 337.—DAVID, THE OATH OF THE HORATII, LOUVRE, PARIS.

were borrowed for public buildings and sculpture to give official dignity to a government that had not yet developed its own organic symbol. As a propagandizing agency, Art is unquestionably of great value. It had been an instrument of the Church in early times and more recently of the Counter-Reformation, and now at the end of the 18th century and the beginning of the 19th, it gave voice to the authority of the new French nation. Yet this use of Art was at the expense of its larger function of interpreting life as a whole.

The best work of David was done when he was unconstrained by the exacting requirements of his official duties of glorifying the

exploits of Napoleon. In the sphere of portraiture, he produced many fine character studies, among them the portrait of *Madame Recamier* (Fig. 338). Externally the design is not unlike the classicistic portrait of Pauline Borghese (Fig. 229) sculptured by Canova about the same time, but the frigidity resulting from following a classic model was avoided to some extent by the painter. Stylistically, it answers to the severe requirements of the prevailing classic manner. The pseudo-antique couch, the Roman lamp



FIG. 338.—DAVID. MADAME RECAMIER. LOUVRE, PARIS.

give the interplay of horizontals and verticals of the classic style. The arrangement of the body in the same general accents relieves the dryness, particularly in the even flow of the drapery. For the portrait, David felt the necessity of warmer colors and softer lines and a more decorative treatment generally than was permissible in the grandiose historical compositions. Though David unquestionably had many virtues, it must be admitted that a contingency of history was the making of him. That he had the strength and the courage to rise to heights beyond his native talents assured him a unique place in political and social history as well as in the history of art.

PAINTING IN THE NINETEENTH CENTURY

DAVID's career parallels that of Napoleon. He rose with the Emperor and went into banishment when he did. The school of art which he fostered produced no great masters. The romantic impulse, finding its most theatrical expression in Napoleon, generated new and revolutionary tendencies among his immediate pupils. One figure of great talent was Prudhon, whose contact with Italian art was different from David's. Under the influence of Correggio and Leonardo he exhibited none of the hardness of the official school. His subtle and vaporous color is blended with nervously sensitive drawing. A poet of rare sentiment, he retained something of the lyrical beauty of the 18th century masters who were eclipsed by the Revolution.

The real successor of David was his pupil Jean Auguste Dominique Ingres (1780-1867). Though both adhered to the classic tradition of noble sentiment and sculptural figure compositions, Ingres reveals considerably more flexibility in his drawing. His enthusiasm for severe Roman types was modified by a very great sensitivity for the lucid rhythms of Greek art, particularly those that appear in vase painting (Fig. 239). He was a great lover of the Italian primitives, of Giotto and the 15th century masters. In accordance with the academic conception of the classical tradition, he conceived of painting in terms of drawing and asserted that if a picture was well drawn it was well enough painted. His drawings, many of which far excel his paintings, are miracles of flowing lucid rhythms, while his color is indifferent, being usually dry and lifeless. Like David, he conceived grand decorative compositions. A ceiling decoration in the Louvre is characteristic of his more ambitious style, modelled after Raphael. The Apotheosis of Homer, one of his best known works, is presumptuous and barren; the symbolism of the Parthenon, before which is enthroned an heroic Homer accompanied by the great artists and writers of ancient and modern times, is cold and dull. With little understanding of the unifying elements of large space that he admired

in Raphael's murals, Ingres was still a master of single figures, and several details, namely the allegorical *Iliad* and several portraits, have a good deal of freshness.

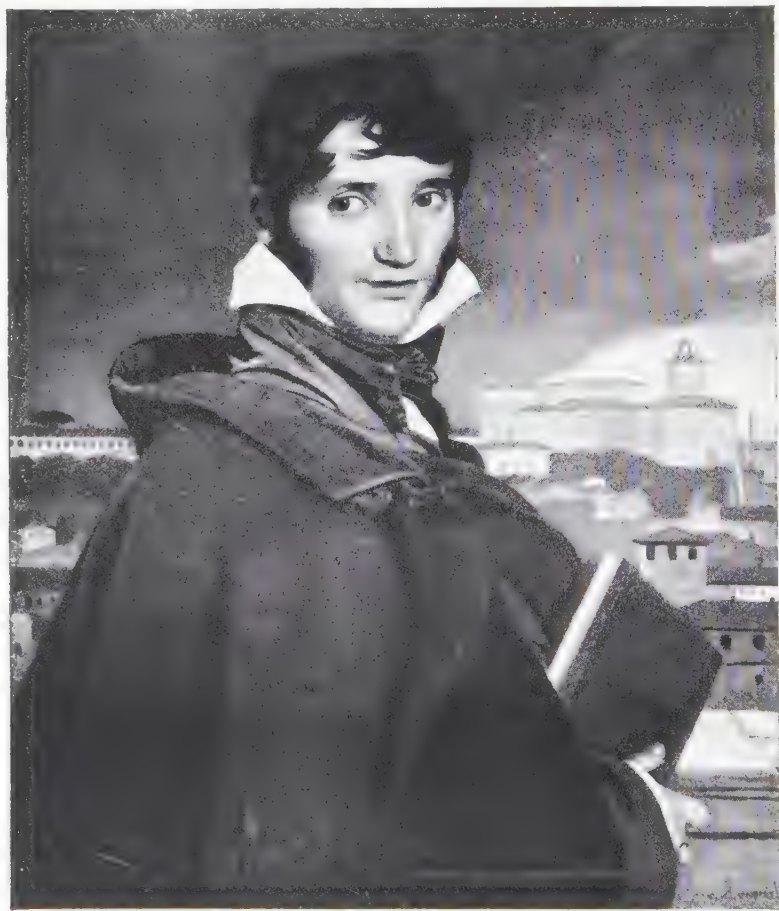


FIG. 339.—INGRES. PORTRAIT OF THE PAINTER GRANET. MUSEUM, AIX-EN-PROVENCE.

But in his more intimate portraits, Ingres exhibits a great sensitivity for personality and a fine feeling for the pattern of line with which the figure is created. His portrait of M. Bertin in the

Louvre is one of the finest of the century. In it, he obtains not only an arresting likeness, but one that is typical of the whole class to which the model belongs. It is a source of great wonder how Ingres with his romantic love for the past and his worship of the steely lines of pseudo-classical art, could use that instrument of precision to depict so telling and realistic an image of his own time. His *Portrait of the Painter Granet* (Fig. 339) shows how effectively and originally he could employ the classic idiom. The rounding of contours shapes not only a surface pattern of great charm, but models the planes of the masses which emerge logically integrated with the surface design. Against a background of Italian architecture, the figure attains plasticity through sinuous lines, while the cubic shapes of the book and the balustrade supply the link between the form close at hand and the distant landscape. It is undeniably derivative from Raphael's method, as in the *Tommaso Inghirami* (Fig. 289), with which it compares favorably in depth and power of expression.

Ingres' yearning for the sublime harmonies of his hero Raphael may be seen in the painting in the Walters Gallery in Baltimore, *Cardinal Bibbiena Presenting his Niece to Raphael* (Fig. 340). The three figures are arranged in the typical order of 16th century Italian composition, in full length close to the frontal plane of the picture. They are viewed against the architecture of the room which has been duly subordinated to them. Despite the contrasts of light, or because of its arbitrary character, there is no feeling for the binding and fusing medium of atmosphere. The design is made static by establishing the figure of the Cardinal in the center, enframed by the door and balanced by equal figures on either side. The unusual color-brilliance (for Ingres) of the robes increases the force of the central accent. As in the *Sistine Madonna* of Raphael (Fig. 287), the Cardinal's robes give movement and variety to the figure. Observe the rising unbroken contours at the left which ascend to the apex of the hat and flow downward in billowing movements, arrested by the fold of the cape, and then descend through the arm directed toward his niece. The downward movement is again arrested in the edges of the white vestment and in the garment folds on the pavement. This tendency to imitate Raphael was Ingres' weakness, for although he understood the Italian master's language of form, he was never quite able to translate it into his own idiom. Specifically, he could not integrate

the isolated forms. For all his efforts at composition, the three figures remain spiritually isolated. But in the single portrait, when dealing with one psychological and plastic unit, Ingres is overwhelmingly convincing and satisfying.

His admiration for the living rhythms of Greek vase painting and sculpture gave him a keen relish for the nude and some of



FIG. 340.—INGRES. CARDINAL BIBBIENA PRESENTING HIS NIECE TO RAPHAEL. WALTERS GALLERY, BALTIMORE.

his finest compositions are of this subject. The cold sculptural nudes of David had little vitality, but Ingres' are lithe and organically conceived. The rounded masses are integrated with the pattern of line in powerfully expressive compositions. Only in his declining years, when his critical judgment was ebbing, did the nude degenerate into the sentimental and voluptuous. Ingres' talents were not small, but his scope was limited. From his long career, he left a rich harvest of great painting that profoundly influenced his century. Degas and Renoir reflect the steady in-

fluence of his fine draughtsmanship and even Picasso of our own time has drawn frequent inspiration from his art. To his death in 1867 he was a bitter enemy of the rising tide of Romanticism that was sweeping over the world.

A. THE ROMANTIC SCHOOL

The past is never forgotten in the present. Whether we are aware of it or not, the pattern of life we pursue is conditioned by our past experience. The history of painting is a continuous stream of activity that is never unaffected by its origins. As the Renaissance painters derived guidance from classical art, so the 17th century masters, Poussin and Rubens particularly, were strengthened and directed by contacts with the thought of the Renaissance. French art has always alternated between influences emanating from Dutch and Flemish art on the one hand and classic and Italian art on the other. The Academy founded in the time of Poussin threw all of its influence toward the classic and Italian, admitting the Northern elements only on sufferance. As long as it could, it held at bay the original painters who endeavored to inject color and movement and the mystery of life into their art. But even in the ranks of the Academy were some men who felt the futility of putting new wine in old bottles; Ingres himself tacitly admitted in nearly every picture he painted the inadequacy of his pseudo-classic forms. The followers of David were continually at war with the master, who demanded strict adherence to a formula which was a synthetic doctrine of what he imagined to be the essence of the art of Poussin, the Italians and the ancients. The Romantic Movement was the revolt of the younger men against the doctrine of authority. They asserted their right to reveal life as they experienced it, with all of its unbounded emotional depth, its color and passion. In music, Beethoven, Berlioz and Wagner, in literature, Victor Hugo, Wordsworth and Byron asserted their freedom to create new patterns of expression and life. The military and political exploits of Napoleon characterize the Romantic Movement in its most dramatic phase. His ambitions fired the imagination of the world, and all Europe fell in love with his enterprise. Beethoven, the greatest artist of the epoch, composed the *Eroica* Symphony with him in mind.

Francisco Goya (1746-1828) belongs to the Romantic age, though somewhat antedating it. The first eminent painter to ap-

pear in Spain since Velasquez, he marks the belated emergence of that country from the protracted Middle Ages. With deadly invective he attacked the abuses of the Church, the incredible suffering of his starved ragged countrymen. In a series of etchings called *The Disasters of War* he let loose a torrent of abuse against the stupidity and sadistic fury of war. His was no patriotic defense of Spain against the Napoleonic aggression; his sharpest barbs were directed indiscriminately at French and Spanish alike. The world of art has never seen so vitriolic a passion as Goya's. As though possessed of demons, he ripped aside the veil of pretense and illusion to reveal the festering cancer of society's moral and spiritual decay. His range of thought and expression was so great that it is impossible to link him with any single phase of his time, since he spans the whole gamut of the 18th and early 19th centuries. He painted idyllic fêtes similar in spirit to the poetic dreams of Watteau, for he commanded the finest talents of his century in the field of decorative painting, while again slashing out the most caustic moral judgments ever seen in plastic art. Compared with Goya's bitter irony, Hogarth's social criticism seems Dickensian. With his originality unhampered by the intellectualism of an official academy, Goya becomes a direct heir to the tradition of the 17th century.

When French artists of the latter half of the 19th century continued in Impressionism the atmospheric mode of seeing that had developed organically through the evolution of European painting, they turned to Goya as their model. This phase of his art may be seen in the blurred atmospheric handling of his landscapes and portraits. In the portrait of *Queen Maria Luisa* (Fig. 341) the forms are treated with broad brush-strokes learned from Velasquez. Jewels and fabric gleam and flash from the atmosphere in which they are dissolved. But Goya's mind was not concerned with the mere mechanics of seeing. He viewed his subject impressionistically because he knew from his own experience and from his contacts with Velasquez that the eye records only spots of color and not lines that bound the form of things. His eye was constantly upon the character of his subject, scrutinizing and analyzing it. Queen Maria Luisa is no beauty, despite the splendor of her costume and jewels. Tactfully Goya rendered the accessories with spirit and brilliance, but the woman and not the Queen looks out at us with the arrogance of a fish-wife and the depravity of a vicious

prostitute. Had the tremendous talents of Goya been thoroughly known in France or had a Frenchman possessed his genius, the development of painting in that country would have been vastly



FIG. 341.—GOYA. QUEEN MARIA LUISA. PRIVATE COLLECTION.

different. As it was, two generations were to pass before his real influence was felt. France was not ready to receive the impact of his genius, and her own development was slow and methodical in contrast to this flame-like genius who possessed within himself

the insight and the spiritual energies of the two centuries in which he lived.

Sooner or later, France took to herself all the cultural and spiritual forces current in Europe and welded them into a consistent expression with a peculiar genius for a systematic elucidation. Her Romantic painters were influenced by the lyric naturalism of John Constable (1776-1837), the great English land-



(Courtesy of the Art Institute of Chicago)

FIG. 342.—CONSTABLE. STOKE-BY-NAYLAND. ART INSTITUTE, CHICAGO.

scapist. The classicists in both England and France had anesthetized themselves to the beauties of the landscape by their intellectualizations of the classic tradition. The Romantic painters in all countries, on the other hand, were quick to find in it symbols of their own emotions. Where the portrait and the classical theme had been the main preoccupation of the 18th century masters in England, in the 19th the landscape became paramount. Constable was influenced by the Dutch landscapes of the 17th century rather than by the heroic landscapes of Poussin, although the latter were greatly prized by the English. The perfect order and logical structure of the classic landscape were not congenial to him, for he

was impressed by the irregularity of nature in its infinite variety of movement and color. The light flows unevenly across the fields of his *Stoke-by-Nayland* (Fig. 342); the thick leafy branches shudder under the pressure of the wind. Disregarding the continental custom of centuries he painted with a brush loaded with thick colors. Large blotches of white are interspersed with the greens to indicate the bright light reflected from smooth leaves. He used distinctly green colors for his trees, a departure from the tradition of painting foliage in ruddy brownish hues.

To prove to one of his critics that trees were actually green and not brown, Constable placed a violin against the branches. People who receive their experience wholly through the eyes of others frequently have to be reminded of the primary experiences. Original artists always derive their experience from nature and shape that experience into communicable form. Like Velasquez, Constable realized the inability of painted color to equal that of nature in intensity of hue and light. To approximate the restless life of color and movement that he had observed, he often applied unmixed pigment in small spots to the canvas. Seen at a distance, these patches of yellow and blue fuse to produce a green more intense than that given by the same colors mixed on the palette. Watteau had done the same thing. It was from such sources that the Impressionists later on arrived at their habitual custom of using direct color, fused in the retina rather than on the canvas. With the vivid portrayal of the intimate aspects of nature—the earth alive with thriving plants, the rolling movement of clouds and the light that illuminates equally the distant cathedral, the oxcarts and farmhorses, the farmer and all that pertains to the countryside—with the presentation of these Constable felt no need for the anecdote, the artificial charms of picturesque ruins or antique heroes. Beside his fresh and invigorating vision of the countryside, the older landscapes of Poussin and even Breughel seem synthetic and composed. It was just such fresh observation of Nature that characterized Romantic art.

Romanticism as an attitude toward life did not have any single source; it was in the air of the western world. In France, David had a bad time restraining the natural impulses of his disciples to abandon his stifling doctrines. The first definite assertion of an articulate revolt from the French classicistic camp appears in the painting of a brilliant young artist named Géricault (1791-1824).

A man of means, he was not dependent upon the good will of the official custodians of art, and he proceeded to Italy where he studied the frescoes of Michelangelo instead of the diluted formulas of the academic pedants. Too intelligent to copy Michelangelo literally, he did absorb his great plastic rhythms and the controlling designs into which they were cast. His studies in Italy, like the *Riderless Races at Rome* (Fig. 343), indicate his profound understanding of the athletic forms of the Sistine Ceiling (Figs.

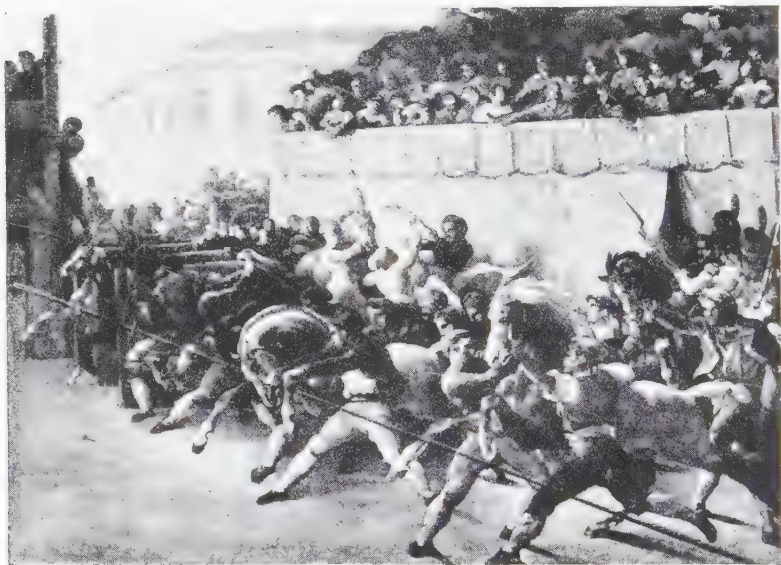


FIG. 343.—GÉRICAULT. RIDERLESS RACES AT ROME.
WALTERS GALLERY. BALTIMORE.

282, 283). What are his jockeys but modern transcriptions of the Nude Slaves of Michelangelo? Where the Slaves bend their enormous strength of sinew and mind to the task of supporting slender garlands in an abstract allegory of strife and conflict, the jockeys exert their energy to restrain the impetuous horses about to enter a race. The contingencies of realistic action demanded less concentration upon the single figure, a weaving together of scores of figures in a coherent pattern of movement. The theme itself, a popular horse race within a spacious city square, was utterly antagonistic to the accepted standards of what was

considered legitimate subject matter for the artist of 1816. Horses might be painted, surely, but only as adjuncts to Greek or Roman generals, and then they must be painted as stiff and lifeless as cast iron statues. From Rubens, Géricault obtained an idea of how the horse might be treated as a plunging, pawing mass of energy. His own passion for horsemanship led him to enlist as a cavalryman in the Napoleonic wars. All his life he was an enthusiastic horseman and, like a sensible person, he saw no reason for not painting the dramatic colorful spectacle of the races.

In their training, the Academies had insisted upon the minute representation of detail in clear sharp lines with exact rendering of every buckle, strap and lock of the horses' mane. But Géricault knew that when he witnessed a race, his eye did not see these details, but the race as a whole, the 'flashing curve of a neck, the spot of white on a horse's head, the sudden gesture of a struggling jockey bringing down his whip. The excitement and movement of the scene could not be expressed in the abstract lines of the classic style so he proceeded to adopt the broad manner of Rubens to animate his forms with surging violence. The masters of the 17th and 18th centuries had well understood this method of painting by suggestive spots, the color and light accents seen by the eye. The Classicists had reverted to an archaic style that isolated each object through the decisive metallic line that bounded it. Géricault, too, realized that the complex action of a group must be unified and given clarity or else its pictorial effectiveness would be weakened. All the Renaissance masters taught him the necessity of simplification through order. In the *Riderless Races* this simplification is achieved geometrically. The excited horses and the spectators are restrained by the rope and the pavilion. The diagonal accents which they form create a movement in space terminated by the rectangle of the palace in the background. Against the foil of straight lines and unbroken planes the dynamic action of the race itself holds the undivided attention. The many spectators are portrayed by a single band of mottled light and shade from which no one person stands out. This method of subordinating details to the composition as a whole was not fully appreciated by Géricault's contemporaries and immediate followers. Not until later in the 19th century were painters fully to realize its significance as a means of attaining unity from diversity.

When Géricault returned to Paris in 1818, he painted a huge

picture that was the despair of the academicians and the hope of the Romanticists. A short time before, the newspapers had given an elaborate account of a disaster at sea when the ship *Medusa* had been wrecked and its survivors battered for three stormy weeks on its single life raft. In painting the *Raft of the Medusa*, Géricault expressed realistically the desperate agony of the survivors as they hail a ship seen on the horizon. Exhibited at the Salon of 1819, it at once set aflame the smoldering controversy between the Classicists and Romanticists. It was termed the worst of daubs by one group and acclaimed as a great modern masterpiece by the other. The recognition won by Géricault as a result was so great that had he not died a few years later, he would have become the undisputed leader of the Romantic Movement in painting. He was its forerunner and his example profoundly influenced those who followed him. He established the precedent of painting the image of the world about him and proved the independence of the artist to choose for himself the means of color and form that were needed to express that vision.

In the intelligent and cultured Eugene Delacroix (1798-1863), the Romantic school found its leader upon the untimely death of Géricault from an accident during a horse race. Lacking Géricault's native instinct for painting, Delacroix was nevertheless a man of great inventive genius and imagination. As a youth he had been swept off his feet by the expressive vitality revealed in Géricault's art. His imagination had been fired by the romantic poetry of Byron, Goethe and Shakespeare which he illustrated in many lithographs and paintings. His illustrations, whether inspired by contemporary literature or the classics, are never a pale transcription of or addition to the literary text. With free imagination and insight into the subject, he rendered the inner psychological intensity and the spirit of the theme with such force that they are independent of any text. Technically the results are not illustrations in the ordinary sense, because they are self-contained units developed from the themes suggested by literature. One does not have to be conversant with the tragic destiny of Euripides' heroine to appreciate the dramatic scene depicted in the *Medea* (Fig. 344), though some knowledge of the Greek tragedy gives additional point to the painting. In a desolate craggy landscape the betrayed wife of Jason crouches within a cavern, about to slay her two children. While the babes twist and cry pitifully beneath her reso-



FIG. 344.—DELACROIX. MEDEA. LOUVRE. PARIS.

lute arms, Medea hesitates; the turning of the horror-stricken face indicates, not a moment of indecision, but the instant when the tumult in her breast reaches its greatest intensity. The tragic depths of the woman's soul are revealed in that moment when, hovering between the past and the future, she is overwhelmed by realization of the awfulness of her revenge. Only a spirit with the same human sympathy that inspired Euripides could have conceived so tremendous a symbol of pity and terror. The great poetic imagination of Delacroix leaped beyond the impediments of pseudo-classical forms to express the essence of the tragedy, and, in doing so, is more truly Greek than those who lavishly imitated them. He might have said with Millet, "He is the most Greek who is most himself."

Color, which the classicists David and Ingres had relegated to the rôle of a descriptive adjunct to drawing, was for Delacroix the essence of painting. From the Venetians and Rubens, he had learned how to give it depth and brilliance. His forms are built up in rich color volumes as opposed to the traditional style of augmenting the drawing with color. In the *Medea*, the reverberating hollow of the cavern is felt in the depth of pulsating color, rather than described by a literal rendering of the scene. And in its ominous depths, one finds the psychological equivalent of the conflict of Medea. Like a musician who builds up a mood through abstract tonal qualities, Delacroix finds the psychological equivalents of emotions in terms of color. With color and light, space dilates and condenses in firm masses; shapes appear and dissolve as color solidifies into substance.

For Delacroix space and form were emanations of the mind. In his treatment of them he seems to express the ideal of the French Gothic builders in whose cathedrals the stone skeletons dissolve into space in a rhythm of form and color. But he also looked forward to the physicists' conception of the material world as a conglomerate mass of more or less condensed energy. Nowhere is this conception so fully expressed as in his seascapes. Here the deep marine hues, the flecks of gliding light and the sense of incessant swelling in the water form an arabesque of great emotional power. The *Barge of Don Juan* after the episode in Byron's poem, and the *Christ on the Sea of Galilee* (Fig. 345) are moving symphonies arousing the deepest and most elemental emotions. Christ rests peacefully asleep in the slender fishing vessel tossed

by the shrieking wind and pounding waves. The wind rips the sheet from the hands of the sailor and the released sail snaps furiously in the tempest. With unimpeded insight into the legends and myths, Delacroix translates them anew, enriching and animating them with his own tempestuous spirit.

Delacroix was first and last an individualist. That is to say, he swore no allegiance to any specific school or masters. Rubens



FIG. 345.—DELACROIX. CHRIST ON THE SEA OF GALILEE. WALTERS GALLERY, BALTIMORE.

most of all inspired him, with his majestic swirl of movement and color. Constable gave him many suggestions as to the color and design of landscape. He expanded the tradition of French colorism through original discoveries concerning the laws of complementary colors. He observed one day that the shadow on a yellow carriage was a bluish hue, the complement of yellow, and he frequently made use of this knowledge, juxtaposing red against green to intensify both through the contrast. Before his death in 1863

the protracted and popular battle between Classicists and Romanticists had been won.

One of the most characteristic and significant features of romantic art is the return to the landscape as found in the poetry of Wordsworth and in the formal language of painting. Since the time of Poussin and Claude Lorrain, the subject had been treated only by a few minor masters. Watteau's garden scenes were the nearest he came to it. David and Ingres with their absorption in classical themes involving figures alone were scarcely conscious of its being. Constable, early in the 19th century, was the artist who opened the eyes of Delacroix to the emotional and pictorial possibilities of landscape painting, and he gave him a method of realizing its possibilities as well. Then, around the year 1830, a few painters living in Paris began to drift out to a small village near the city, called Barbizon, where living was cheap and there were woods and fields to paint. Corot, Rousseau and Millet were among those who formed the Barbizon school.

As Chardin in the 18th century had painted still lifes and interiors with an intimate feeling for the glowing warmth of fruit and vegetables and the atmosphere that surrounds them, the Barbizon painters endowed their landscapes with a sentiment that gives each meadow and each forest path its peculiar local beauty. Theodore Rousseau paints the solitary oak dominating a flat patch of pastureland. He sees the peculiar rugged character of the gnarled branches, the coarse density of the oak foliage, the tufts and clods of the turf with pools of standing water like glass, reflecting the sky. The grand compositions of the heroic landscapes of Poussin are abandoned for the spontaneous and informal aspects of nature, more like the Dutch landscapes of Ruysdael. These nature lovers, Daubigny and Diaz among others, saw the landscape with fresh naïve eyes in its quiet moods. Seldom if ever did they bring to it the romantic passion of Delacroix, nor did they view it as a background for involved narrative. They loved it for its own peculiar charm and painted it for its intrinsic delight.

This group of painters would have been of rather local interest had not Camille Corot (1796-1875) attached himself to it. Corot is Chardin out-of-doors. Everything he sees is instinct with visible charms. He has something of the innocence of Claude Lorrain. Taking no account of the heated controversies of the camps of Romanticists and Classicists, he demanded of life only paint and

canvas and adequate leisure for their use. Simple in heart, he tried honestly to translate visual experience into the ordered pattern of his picture. An indulgent father supplied him with a small income and he never felt the necessity of modifying his style to suit critic or patron. As a result, his art has an indescribable charm of ease and casual simplicity. Yet this very simplicity is disarming, for Corot had the surest sense for composition and balance in his pictures. His designs are so spontaneous and free from strain or



FIG. 346.—COROT. VIEW FROM THE VILLA D'ESTE. PRIVATE COLLECTION.

artificiality that they seem like happy accidents. Like so many others, he was drawn to Italy, enthralled by the mellow light and the quiet beauties of the Latin landscape. In the *View from the Villa d'Este* (Fig. 346) there is the same clarity in the complex of trees, mountains and buildings that one finds in a Poussin. Only Corot softens the contours, for he had observed the atmosphere that brings all the forms into consecutive spatial relationships. He combined Claude Lorrain's sensitivity for light with Poussin's sense for design and, from the two, derived an original and poetic synthesis. In the *View from the Villa d'Este*, the balustrade in the foreground furnishes a stable base for the infinite variety of the

complex landscape. The unobtrusive accents of the balustrade at the left and the road at the right direct attention inward to the deep valley. The slope of a roof, the happy placing of a tree combine to produce an idyllic pattern of moving light and swaying trees. His colors are soft and luminous. Silver greys and greens predominate, but these are used with infinite flexibility and variety.

Corot's figure compositions are no less beautiful than his land-



FIG. 347.—COROT. MATERNITY.
PRIVATE COLLECTION.

scapes. In the simple pyramid of his composition *Maternity* (Fig. 347) the form of the mother and child is logically coordinated with the surrounding landscape. A restrained sentiment of great tenderness is felt in his figure compositions, in his portraits and studies of the nude. His feelings for lucid uncomplex patterns of great structural integrity coupled with honestly expressed sentiment make Corot one of the most moving and poetic of painters. In his later years, he seems to have yielded to the popular demand for more obvious sentimentalism. The scores of fog-filled land-

scapes, in which nymphs prance about under fuzzy trees, he turned out with thoughtless facility. These potboilers constitute a phase of his art that does him no credit and have little in common with his unquestioned masterpieces.

J. F. Millet (1814-75) attempted to interpret the somber life of the peasant, to render his eternal struggle with the soil. Figure groups of reapers as seen in his *Haymaking* (Fig. 348) are frequently restrained and moving in their simplicity. But often his sentiment is too insistent and literal, being insufficiently expressed in the formal language of art. The *Angelus* and *The Gleaners* will always be popular expressions of sentiment because of the poster-

like simplicity with which they declare the religion of the simple-hearted peasant and the ennobling dignity of his toil in the fields. When he is unburdened by social and political abstractions, Millet



FIG. 348.—MILLET. HAYMAKING. LOUVRE, PARIS.

is a highly gifted painter, as many of his superb drawings and studies testify.

B. THE REALISTS

The Romantic painters, though they saw the world through a veil of poetry, literature and sentiment, established the precedent of the painter to deal with intimately felt personal experience both as to the selection of subject matter and interpretation of it. The landscape was painted as it actually existed for the eye, though not without the imposition of various moral and literary values which gave it a definite pathetic coloration. Nevertheless painters were dealing with the familiar scenes of common experience like peasants digging in the earth and mowing hay. At the same time, men like Puvis de Chavannes were painting allegories of the seasons and religion, and Ingres was still a vigorous champion of

the classical school. Into this middle 19th century came Gustave Courbet (1819-1877), a man of great energy and a confused understanding of what was the ultimate aim of his art. Impressed by the great realism of Hals, Velasquez and Rembrandt, he pugnaciously maintained the opinion that the Classicists and the Romanticists were both wrong, and that the sole aim of the artist should be to represent nature as it is seen by the eye, unmodified by abstract ideas or derivative poetic sentiment. His sober realistic landscapes and matter-of-fact still lifes caused his critics to ridicule him with the name of *realist*. Arrogantly he accepted the challenge and posted over his studio the legend, *G. Courbet, Realist*. Carried to its logical conclusion, the theory is absurd, since a painter is not a mechanism for recording visual stimuli like a camera. But it was a healthy position for Courbet to take, since it led him to exclude from his canvas all pompous historical subjects and worn-out abstractions and to turn to a direct study of nature and the actualities of men and women. Those of his paintings which conform to his theory are dull, heavy and ponderously literal because they have no inner organization as to structure or psychological focus. But like Millet, when he abandons abstract ideas and allows full play of his creative imagination in shaping his theme, his work is of high distinction. His is a prose heightened by the salt tang of actuality.

America is fortunate in possessing several of his finest canvases, among them the *Preparation for the Wedding* (Fig. 349) in the Smith College collection at Northampton, Massachusetts, of which a detail is illustrated. It is a large interior, similar in its breadth to some of those of Velasquez. In few instances has Courbet shown so masterful a sense of composition. The rectangles of the space-amplifying table and the simple openings of window and door provide a solid and quieting means of organizing the action that involves many moving people. And how harmoniously they are spaced in the great room, and what a variety of action and attitudes: the absorption of the women attending the bride, those who leisurely arrange a bouquet of flowers or place a bowl on the table, the three girls who vacantly loiter before the open window! The space and the forms are marvellously articulated as a visual unit, singularly lucid and spacious. The topical and purely descriptive aspect is subordinated to a vision of the scene as a totality. With broad brush-strokes, the individual features of a face or a cos-

tume are suggested and given just the proper emphasis in relation to the entire theme. Against the somewhat warmer cream-tan hues of the light and the frame of the open door space, the bride who is the plastic and psychological motif of the drama is outlined. As in most of Courbet's pictures the color tones are in a low key, but within the limits of reticent blues dissolving into neutral and luminous greys, there is a rich variety of cool harmonies. The colors are



FIG. 349.—COURBET. PREPARATION FOR THE WEDDING. DETAIL. SMITH COLLEGE COLLECTION, NORTHAMPTON.

not local ones of specific objects, but arise from the diffused light of the room.

The service that Courbet performed, in addition to painting hundreds of superb landscapes, portraits and still lifes, was to show the inherent worth of all subject matter as valid material for the painter, to expose the falsity of the "noble" subjects and to deny the necessity for stimulating romantic or picturesque themes. He demonstrated the truth that it is not so much *what* the subject matter is as *how* it is painted. His answer to the Roman-

tic-Classic controversy was to deny both in the name of forthright observation and interpretation of nature.

Courbet made no remarkable innovations in the method of painting. His vital personality is largely subordinated to the cool impersonal order of nature that lies beyond human moods and sentiments. For Honoré Daumier (1808-79) however, realism lay in entering into his subject with the imagination. He transforms nature by dominating and ordering its every plane and volume. Disciplined by hard years of making cartoons for political journals, he de-



FIG. 350.—DAUMIER. THE SOUP. DRAWING.

veloped a linear technique that made for swift and decisive effects. The necessity for brevity and expression demanded by his invective political lithographs led him to evolve the most concentrated and dramatic style ever produced in French art. *The Soup* (Fig. 350) is characteristic of his amazingly forceful expression. The half-starved couple voraciously falls upon the single dish of their dinner. Their intense absorption in eating is plainly not gluttony but comes from a condition bordering on starvation. The whole outside world loses existence in the one eager moment of satisfaction. Daumier was not interested in nice questions of esthetics, but more than any man of his time, he was concerned with human beings. The maddening hunger of the poor, the ballyhoo of the

sideshow, the smug conceits of shyster lawyers and a score of diverse themes he painted with withering irony or sublime compassion as the subject commanded his wrath or his sympathy. Though he took his subjects from the street, the barroom, the theater, the public halls of law, he never merely reports glib de-



FIG. 351.—DAUMIER. THE WASHWOMAN. BLISS COLLECTION, MUSEUM OF MODERN ART, N. Y.

tails as a journalist or illustrator might. In each theme he searched out the most telling and characteristic action which he portrayed in the most inevitable pattern of form.

In the Museum of Modern Art in New York City may be seen his *Washwoman* (Fig. 351). The woman climbing up the embankment has something of the majesty of Michelangelo's sibyls and something of the gravity and rhythm of movement of the

finest sculptures of antiquity. In a few accents the sturdy bulk of the woman is revealed, silhouetted against the light of the background. The act of carrying a burden is balanced by the support she gives her child who, with one last effort, attains the difficult top step. No Madonna was ever fashioned with greater attention to the spiritual relationship between the mother and her child than Daumier reveals in his study of maternal solicitude. He observes the precise curve of the solid muscular arm supporting the bundle of clothes and the flexed arm that steadies the wobbly step of the youngster. The woman's attentive glance expressed through the inclination of the head is contrasted with the strained expression of the roundheaded child. Daumier is the one master of 19th century France who penetrated the mind and heart of humanity as had Rembrandt and Giotto and a very few others.

C. IMPRESSIONISM

Daumier chose his subjects for the light they cast upon human affairs. He treated them, after his own fashion, in the monumental style of the Italian masters Masaccio and Michelangelo. There is not so very much difference between the artistic idiom of Masaccio's Expulsion from Paradise (Fig. 261) and Daumier's Wash-woman. The chief difference lies in development of the *chiaroscuro* which envelops the figure of Daumier to include the background as an integral part of the design. In both, there is the same stability and sculptural mass and organic movement of figure. With vigor and originality, Daumier employed the light patterns of Rembrandt to function with the large rhythms of sculptural volumes. Within the deep shadows of his *chiaroscuro*, he obtained amazing variety by a few basic colors. But his colors have not the sparkle and clearness of those seen directly in nature. Courbet, likewise sworn to the service of his eyes, used colors that were derived largely from the Spanish masters and from Hals.

Now there is no necessity for painters to give the freshness and vividness of colors in nature. Had he so desired, Daumier could have composed his pictures with mud, and through the pattern of varied lights and shades, produced effects of vibrant atmosphere and even color that would be more truly colorful than many masters could achieve with pigments of the brightest hue. But the rendering of intense color and light effects in the broken rhythms of nature had not been achieved by either of these "realists."

Courbet had thought to do it, but Daumier had not even been interested in the purely visual aspect of reality. Their paintings had been organized and pigmented with the traditional methods, except when Courbet spurned formal relationships in his more chaotic and photographic works. Both had approached realism by dismissing dreams of poetic fancy, imaginary subjects from literature, and the images of religion. They turned instead to the ready-at-hand scenes of their own streets and houses, the still life upon their studio tables. They represented these according to the large forms seen by the eye which automatically excludes the unessential details. But on the whole, they had treated light and color no differently from the Old Masters.

In contrast with Daumier and Courbet, a group of painters appeared about 1865 which had for its general aim a manner of representation that more nearly approximates the physical process of seeing. They had noticed that the images observed by the eye are of bewildering variety and irregularity. Colors are often unpleasantly juxtaposed, acid and thin to boot. Traditional artists had always softened and modified their palette colors according to some harmonious scheme, arranging tones and separating colors by a series of graded hues and intensities to avoid too abrupt contrasts. In addition, most of the old paintings had been so thickly encrusted by coat after coat of yellowing varnish that their real character was almost destroyed by what was called a "golden glow."

One of these painters was a young man named Édouard Manet (1832-83), who became interested in the luminous art of Hals, Velasquez and Goya, men who had often painted without using dark colors or the murky tones that destroy bright ones. Manet found that they produced the most vivid effects by painting with broad brush strokes in clear colors, unseparated by artificial intermediate stages. As an experiment, he composed in 1863 a rather cumbersome picture called *Luncheon on the Grass*. A nude woman is seated in a park with two fully dressed gentlemen; all of them are realistically painted. Manet's choice of subject was prompted by similar groupings of nude and clothed figures in Renaissance paintings, notably canvases by Titian and Giorgione. His intention was to paint a subject of varied complexity of color and forms, hence it was an academic piece, a study. Avoiding heavy modelling and painting the landscape and figures with large areas of color,

he tried to keep the tones fresh and clean. To the student of painting, it is a most interesting composition, for in it may be seen clearly the Italian, Spanish and Dutch influences that went into the making of Manet's style. A self-righteous and priggish public was shocked by the spectacle of nudity realistically portrayed, and nearly all the critics condemned it on technical grounds, as they had the work of Courbet and Daumier.

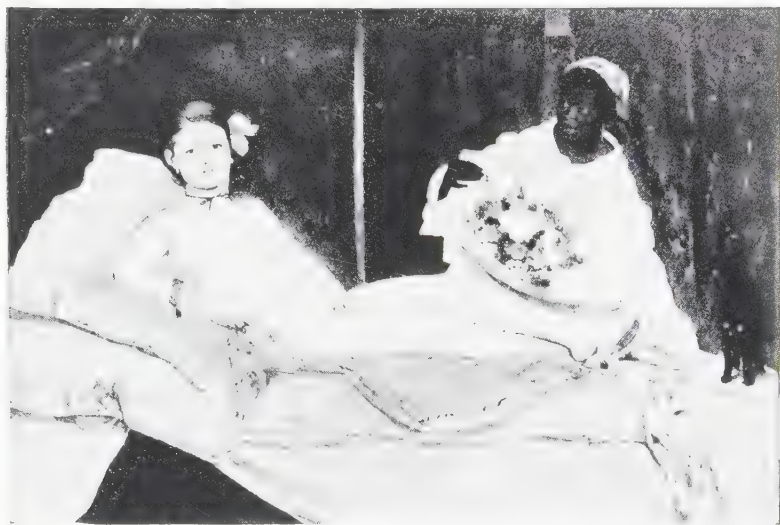


FIG. 352.—MANET. OLYMPIA. LOUVRE, PARIS.

When Manet's paintings were shown, so great was the public curiosity and opposition that special guards had to be posted to protect them, particularly the *Olympia* (Fig. 352) in which his originality was even more pronounced than in the *Luncheon on the Grass*. A nude courtesan, reclining on a couch, is attended by a Negress bearing a bouquet of flowers. At her feet, a black cat arches his back. The spontaneity of the conception is striking. The woman, a remarkably characteristic and contemporaneous type, looks out at the observer with undisturbed composure. Parisians had been long familiar with the velvety charms of the properly abstract nudes of the popular painters following the types inherited from the 18th century. They were pretty and coyly voluptuous. When, however, they saw a nude that was neither coy nor

seductive but frankly a naked woman, all of their indignation was aroused at what they considered an insult to common decency. The color of the flesh is clear and firm, the contours crisp and lucid. The warm tones of the flesh are contrasted with the cool tones of the linen; the silk scarf set off from the coarser cloth. There is nothing seductive nor grossly sensual about the painting. The colors are kept clear by the suppression of muddy shadows, and warm notes are juxtaposed to cool ones in a design that is firmly knit together. Manet consciously suppressed the complexities of the space to preserve a simple and expressive surface design. This he did by painting as if the source of illumination were directly in front of the object portrayed, thus securing a more integrated surface pattern. This idea may have been derived from Japanese color prints which were enjoying a great vogue about this time in Europe. Painters learned from them the decorative value of the flat designs developed by oriental artists.

Manet belonged to a group of painters called Impressionists. They exhibited landscapes and still lifes that at first sight seemed to be rough studies, indicating the general scheme of the color in a scene. Some of their pictures were called Impressions of a Sunrise, or Impression of a Forest, and contemptuous critics derisively dubbed the painters Impressionists. These men rediscovered some of the principles that earlier masters had employed, such as the division of pure color. Watteau and Constable had juxtaposed spots of pure blue and yellow on the canvas to produce a more intense green than would result from mixing the same colors on the palette. Seen at a distance, they fuse in the eye, producing an effect approximating in liveliness colors directly observed out of doors. And most important of all, they painted directly from models in full sunlight for the first time, taking their canvases out of doors the better to observe the effects of strong light. Courbet, the Barbizonists and Constable had unquestionably made sketches and studies of landscape in the open, but their pictures were always composed and painted in the steady cool light of the studio. Their colors were correspondingly pitched to the low key of indirect light. In analysis of light and color, no painter was ever more scrupulous in observing every nuance of living color than Claude Monet (1840-1926). Relying upon the physical activity of the eye, he tried to keep from his pictures any hint of what the mind knows about the landscape or the still life as to its solidness,

the texture of bark or stones, or the vague sentiment surrounding the scene. Instead, he painted with astonishing skill, the light and color emanating from these objects.

When Courbet painted the sea, he was impressed by the untamed power of crashing waves, so he emphasized the glassy masses of water that curled and broke with thunder upon the long stretches



FIG. 353.—MONET. THE WAVE. PRIVATE COLLECTION.

of white sand. When Monet painted *The Wave* (Fig. 353) he subordinated thought and sentiment to purely visual phenomena. He observed the broken water reflecting, in a split second, the colors of the clouds and the cliffs, and the dazzling white spray. He avoided traditional formulas for picture composition, painting it in simple rectangles, fiery and sparkling with direct color, or pale and fragile notes of reflected tones. Like Vermeer and Velasquez, he observed that even shadows are alive with color, that there are no dead spots for the truly seeing eye. Local colors were banished

because he found them in no object in nature, for things take their hue from lights reflected from their surroundings. If realism consists only in recording the experience of the eye in observing the life and movement of color, no painter is a greater realist than Monet. But of course, the reality of things lies deeper than any purely optical phase of appearance. If Monet's paintings were merely mechanical transcriptions of what he saw, as some maintain, his art would be no more than a curiosity of conscientious craftsmanship. But such is not the case. They are informed with amazing life and brilliance. Seeing them, we become conscious of the exalted poetry of nature expressed through light and color; a whole world of beauty bursts suddenly into our consciousness. Velasquez and Vermeer revealed the splendid drama of half-lights dissolving and forming to animate the space of their interiors, while Monet leads one into space limited only by the range of the eye and felt in all of its vastness.

The moralistic bias of Daumier is wholly absent in Monet's works; he was a pantheist and naturalist seeking out the still-undiscovered beauties of nature. His eye, like Velasquez', was innocent of any interpretation of moral or intellectual subtleties. The freedom of the Impressionists' pictures from noble sentiment or edifying narrative excited the public and critics alike to the same fury that Courbet's naturalism had aroused, and for the same reasons. No history or piquant episodes, no sentimentalizing of landscape or flowers, but a poetry of vision, a song that escapes the ponderous mechanism of the intellect and speaks to the spirit which relishes the intoxicating radiance of nature.

In Monet, the principles of Impressionism received their definitive expression. Pissaro, Sisley, Degas, Manet and Renoir all adhered more or less to them; painting in the open air, division of colors, the dissolving of forms into color patches, unconventional and seemingly accidental patterns, the exclusion of sentiment and abstract ideas. Yet each member of the group has a distinct personality that emerges in his art. Auguste Renoir (1841-1919) is less objective than Monet. His vision is warmed by delight in everything that is young and flowing with the sap of life. He responded enthusiastically to the sight of flowers and children, and communicated their freshness and life to his canvas. He cared not a rap for any theory of art, so long as he could paint the opulent verdure of landscape, the gleaming flesh of bathing women

enveloped in opalescent atmosphere. He is one of the few great painters in color, attaining in it the range of effects, and sometimes the profundity, of the Venetians. His color lives and sparkles upon the canvas, yet it always defines the forms in masses which appear rounded and solid. He never seemed to concern himself about the pattern or the organization of his pictures, probably because they are sustained by the pulsing beat of color in a movement which carries the subject with perfect ease. Like other Impressionists, he



FIG. 354.—RENOIR. BATHING WOMAN. PRIVATE COLLECTION.

applied his pigments in little hooked daubs that set the forms vibrating. His brush caressed the canvas, transforming the masses into living things. Where other eyes saw surfaces and isolated fragments and unrelated scraps of objects and colors, he saw continuity and harmony. In his frequent representations of *Bathing Woman* (Fig. 354) he did not paint specific models posed in a particular room or landscape, but an abstract vision of Woman, robust and healthy, sublimely unconscious of her abundant strength and fertile sensuality. He recalls at times both Watteau and Rubens, for his paintings have the decorative charm of the one and the pagan exuberance of the other. But he is always more subtly in-

tuitive than the Flemish masters. There is no social criticism, romantic introspection nor philosophical nuance in his art, only a pagan delight in the fullness of living, expressed through the color and mass of vibrant forms.

Edgar Degas (1834-1917) was the one Impressionist who was not habitually an open air painter of landscapes. Like Chardin, he stayed within doors, but his range of themes is more varied.

Haunting the cafés and the theatre, he studied the behavior of people in their most unconscious actions. A remarkable visual memory helped him to make accurate notations of the exact pattern formed by a man reading a newspaper, or a laundress yawning over her hot task. But his purpose in making these observations was quite different from Daumier's. Degas took a sardonic delight in contriving revealing patterns of action from casual attitudes of a girl washing herself as in *The Bath* (Fig. 355), ballet dancers rehearsing a routine or a café singer open-mouthed before her audience. From these impressions, he distilled the most cunning designs of frag-



(Courtesy the Metropolitan Museum)

FIG. 355.—DEGAS, THE BATH. PASTEL. METROPOLITAN MUSEUM, N. Y.

ments, which in their suggestiveness, imply the whole character of the subject portrayed. Sometimes the pattern seems to be the whole end in view, and the subject stripped of all its meaning. Like Ingres, from whom he derived much of his inspiration, Degas was a great draughtsman and an indifferent colorist, though his color, especially in pastels, is always lively and decorative. From the Japanese print, he learned the suggestive powers of unusual space composition. He places his figures against a flat unmodelled surface, almost as flat as relief sculpture and with something of the same crisp decisiveness of line. By the texture of a line which has acquired form by absorbed light, he sug-

gests the weight and mass of things; novel and arresting designs result from stressing fortuitous accents of objects or movements. With uncanny detachment, perhaps suggested by the impersonal method of the camera, he recorded hitherto unnoticed kaleidoscopic impressions of humanity in pictures that are loaded with trenchant observations and tinged with irony.

Practically every phase of Impressionism had its origin in some historical style. The masters of this school brought together various practices from Japanese, Spanish, Dutch, Venetian and earlier French art and established a grammar of style which has transformed the idiom of modern art. For good and all, they banished the dark muddy shadows of the Realists and created a wealth of new compositional possibilities that express more fully the complex rhythms of modern life. Their analyses of color and light, and the methods of representing direct sunlight, effected through scientific knowledge of physics, made available a technique of luminism by which effects were obtained that even the greatest masters in the past had only approached. Impressionism as a dogma may be viewed as the final step of the painter's quest for representing only what the eye sees. It is hard to imagine any master surpassing the accomplishments of Monet in this direction. In practice the various masters all went beyond the method of pure perception, having once recognized the established grammar and idiom of the style. Place an Impressionistic painting beside one of the old masters and it will be seen that the brilliance and tempo of the modern picture have been effected at the cost of certain other desirable qualities. Monet, in his preoccupation with the purely visual qualities of the landscape (Fig. 353), has not given any profound expression to the depth and hardness of rocks and the sliding volumes of the sea. The space that is governed purely by what the eye can see is not so dramatically organized and articulated as it is in a landscape of Poussin (Fig. 327). Many portraits by the Impressionists reveal no analysis of character whatever, so intent was the painter on keeping the intellect from interfering with the visual character of his subject. The subject, whether portrait or landscape, too frequently melts into granules of color, losing the essential human significance of the model.

D. THE POST-IMPRESSIONISTS

The men who were a few years younger than the Impressionists, or who developed after the inauguration of the movement recog-

nized the limitations of its method and rapidly made corrections. The greatest of the Post-Impressionists was Paul Cézanne (1839-1906). In his own words, he "wished to make of Impressionism something as solid and durable as the old masters in the museums." He was thinking of the monumental art of the Italian Renaissance, of Masaccio, Michelangelo, and Titian and of Poussin. In the older art he recognized qualities of solid mass, rounded forms integrated in stable space rhythms. Cézanne greatly admired the work of Poussin, who had gone a long way in reconciling demand for surface decoration with that for representation in depth and mass. The problem Cézanne set for himself was to take the luminous atmospheric colorism of Impressionism and to construct images with it that would have the stability, the depth and solidity of the older pictures. He felt that the characteristic form of things had been dissolved into intangible and meaningless color spots by the painters of his day. He recognized that the Impressionists had found how to represent the natural color of things, but that in the process of recording the light and shade playing upon color, contours and form limits had been so destroyed as to render the forms themselves flat and lifeless.

In his long labors to evolve a method that would render nature more accurately and at the same time more expressively than Impressionism had done, Cézanne made many false starts. All of his fumbling attempts met with the most caustic and cruel disparagement from nearly everyone who saw or even heard of his work. He was the ugly duckling of the Impressionists when he was working in their method. Apparently he had no gifts or talents. Nothing he did pleased anyone, least of all himself. Retiring from Paris to the provincial city of Aix he isolated himself from all external influences to "remake Poussin after nature." No painter ever had so many failures or showed more courage to go on and on after a thousand abortive efforts. He worked largely with still life because a bowl of apples on a table never moves and can be studied at leisure. He would investigate the architectonic relations of the round bowl and the spheres of the fruit, noting the transitional tones and accents that established relationships between the essential shapes, coordinating them with the fold of a napkin and the table edge. He submitted the still life to the same analysis that Rafael gave to a Holy Family, observing the formal relations that make for adhesion and unity. He would first view the subject as an abstract design, a pattern of shapes, in order to

realize the dynamic relations of its component parts interacting. But his interest was not in a pleasing and unified design for its own sake, nor in the decorative sequence of forms that Raphael created in his compositions. His concern with inner organization was solely to effect a complete realization of every aspect of his subject. In short he aimed at the most realistic image of the apples and napkin that was possible.

Cézanne's search for a means of expressing the depth of cubic form led him to make an exhaustive study of the continuous planes that make up a solid. Each plane he designated by a certain color intensity, and by careful gradations in the planes, he effected a powerful illusion of cubic forms. It is obvious that not all of the infinite planes that make up a solid can be recorded by the painter or even seen by him. He must simplify, indicating enough of the consecutive planes to make the object appear on the canvas as it does in nature. In his *Landscape* (Fig. 356), the degree to which Cézanne indicated the essential structure of the scene is apparent. A black and white print shows only the patches of tones that demark the key accents in the articulation of the space and the objects in it. Though one at first misses the picturesque details that Breughel introduces (Fig. 306), Cézanne has given qualities of consecutive space volumes that characterize the essence of landscape more powerfully than any number of spotted cows, grazing horses and particularized elm trees. The person unfamiliar with the elliptical and abstract nature of modern art will be at first bewildered by the smudgy and apparently disordered aspect of many of Cézanne's pictures. A little attentive study of them will soon discover the depth and honesty of his vision. All storytelling and literary descriptive features are sacrificed to unified interplay of plastic elements to attain a dramatic rhythmic embodiment of space and form. As in the landscapes of Poussin, the effect is of heightened intensity of the senses which suddenly respond to the feeling for space as a vivid experience. Powerful stimulants sometimes produce this sudden awareness of an experience to which one has previously been blind.

Cézanne had a thousand failures to every success, but even his failures are magnificent fragmentary revelations of experience. He realized better than anyone when he had succeeded or failed to "realize his sensations," as he put it. He thought of himself as a primitive working in the method he had discovered. And



FIG. 356.—CÉZANNE. LANDSCAPE. PRIVATE COLLECTION.

there is indeed something of primitive directness and natural instinct for essentials in his pictures. The *Cardplayers* (Fig. 357), one of his greatest figure pieces, brings complex plastic bodies into equilibrium with the fluid space of the room. Everything essential has been rendered in color, the texture of cloth, the flesh tones, the cards and the atmosphere and all are translated thereby into an amazing reality. The picture gives the subject an immediacy and directness similar to that of Jan van Eyck's Portrait (Fig. 247), together with the monumental stability of Giotto and Masaccio.

A Post-Impressionist of the utmost originality was Georges Seurat (1859-1891), who, like Cézanne, was conscious of the looseness of Impressionist design. He composed his color areas by tiny discs of pigment, suggesting mass and receding space by variations of intensity. Where the Impressionists wished to show flight and restless motion, Seurat strove for a monumental tranquillity, a repose of solemn grandeur that uncannily suggests the most momentary and casual movement. His *Sunday Afternoon at the Grande-Jatte* in the Chicago Art Institute (Fig. 358) is his masterpiece. The forms are disposed upon the canvas with such exact understanding of their relation to each other, their position so justly established with respect to the total design that the strollers in the park seem crystallized in their most characteristic attitude as in timeless space. The most trivial forms, a plug hat, the silhouette of a bustle, the arc of an open parasol, are so subtly interwoven in the fabric of the design that they appear as vivid fragments of the world inhabited by Seurat which lives again for us in the color and space rhythms of the composition.

While Cézanne and Seurat were finding the means to realize solid forms and classically lucid patterns of space, Vincent Van Gogh (1853-90), a Dutch painter whose art was formed on that of the Impressionists, was evolving a style the exact antithesis of theirs. His art cannot be disassociated from the conditions of his everyday life, for no master has ever poured out the essence of his passionate being in his painting as did he. Half mad and wholly mystic, in his early years, Van Gogh was a preacher in miserable mining towns. His intense love for his fellow men and the excessive zeal with which his almost insane devotion manifested itself, led him into all manner of tragic conflicts. People were revolted by his fanaticism and he was defeated at the



FIG. 357.—CÉZANNE, CARD PLAYERS, PRIVATE COLLECTION.



FIG. 8. SECRET SUNDAY AFTERNOON AT THE GRANDE JATTE, ART INSTITUTE, CHICAGO
(Courtesy of the Art Institute of Chicago)

very beginning of a career that absorbed him body and soul. He was a mature man when he turned to the study of painting.



FIG. 359.—VAN GOGH. SELF-PORTRAIT. PRIVATE COLLECTION.

and in a few years, when most artists take decades, he mastered the technique of painting and developed a personal style. Following now Millet, now Daumier and now the Impressionists he finally evolved a method that was entirely his own. In painting,

he found symbols for the burning intensity of his spirit. The sun-flowers he paints writhe and twist, consumed by the heat of their own radiance. Forms take motion to correspond to the sensation of the painter who sees them as living bundles of energy like himself. He paints cypress trees that bend to the wind, their foliage twisting in long darts like tongues of fire. Color excites him to a frenzy of activity, and he paints the sun-drenched wheat fields as if they were caldrons of molten gold.

His reaction to color was so violent that he literally invented colors that are psychological equivalents of the actual ones found in nature. The pigment upon the canvas is laid on in thick ridges modelled almost like sculptured metal, as though the intensity of his violent emotions would burst the limits imposed by the flat surface of his canvas. Like Cézanne he "realized his sensations." But where Cézanne's sensations were governed and moulded by the cumulative tradition of centuries in art, Van Gogh's sensations sprang from a fiercely intuitive and mystic mind that was a law unto itself. One may see in the livid colors of his *Self-Portrait* (Fig. 359), in the intense expression of his fanatical eyes and the tumultuous pattern of the brush strokes that create the design, both his consuming passion and the method by which he liberated its surging emotion.

CONTEMPORARY PAINTING

IN COMMON with Seurat and Cézanne, Van Gogh spoke a profoundly original and daring language. If there is one outstanding characteristic of painting since the opening of the 20th century, it has been a tendency toward originality in methods of expression. All painters of recent times have been dominated by a passion for novel construction, for this or that theory of art. A dozen highly intellectualized theories have sprung up, had their little day of journalistic triumph and vanished since Cézanne's death in 1906. The modern School of Paris, pledging allegiance to Cézanne, has been the focal point of most of the artists of Europe and America. Cézanne's efforts to synchronize the formal design of his pictures with the known shape of things sometimes forced him against his will to distort the appearance of his subject. He recognized that the design of a portrait might be well integrated in regard to space and color sequences and yet not look the least bit like the person posing. Any hack illustrator can make a relatively convincing likeness just as he can reproduce the general characteristics of a chair that he is sketching. But the serious artist seeks to give plastic expression to space and materials in a unified and moving pattern that embodies more than the surface appearance. In his efforts to express the basic reality of the subject, certain literal characteristics are sacrificed to the formal rendering of an integrated design, and accordingly some distortions appear.

Many critics and painters were so profoundly impressed by the formal designs effected by Cézanne that they erroneously believed that he was not interested in anything but the self-contained composition and that he willfully ignored realistic representation. Consciously or unconsciously, painters reacted to the freedom with which Van Gogh and Cézanne rendered the familiar shapes of their subjects, and claimed that art should be freed entirely from the bonds of realistic representation. Many thought that painting should be as abstract as music, which imitates no recognizable

sequence of sound found in nature. The statement of Cézanne that all things tend to assume the shape of cones, spheres and cubes was argued as justification for complete abstraction in painting, though clearly what he meant was that complex forms to be immediately comprehended in art should be represented in their most basic and elemental shapes. The rise of the group that went by the name of Cubists was not wholly due to this erroneous interpretation of Cézanne. The reaction to the methods of Impressionism and the Neo-Impressionists who went even further in the analysis of the visual experience prompted artists to construct compositions intellectually arrived at and not following the mechanics of optics.

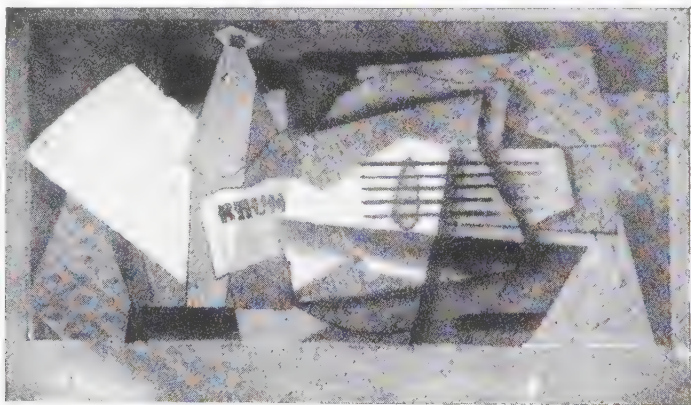


FIG. 360.—BRAQUE. STILL-LIFE, PRIVATE COLLECTION.

Georges Braque (b. 1881) and Pablo Picasso (b. 1881) for years painted many pictures that had no subject matter. It would be more accurate to call them compositions rather than pictures, since they consist wholly of geometric colored forms which technically are executed with a fine sense for color and form-relationships. Such an abstract design as the *Still-Life* (Fig. 360) by Braque, however well painted, can have but the most tenuous appeal and then only as an exercise in method. Seeing such a picture is like hearing a gifted pianist practicing exercises on the keyboard before giving a recital. One longs for the time when such unquestioned technical talent will be used to clothe with fire the thought and emotion common to all humanity. Fortunately

Cubism has had its day and need no longer perplex the uninitiated who have no especial taste for fine painting in a vacuum.

The argument that abstract art expresses in some degree the rhythms of the machine age may have some bearing upon its origin, but actually there is little evidence to show that the machine requires any such arbitrary stylistic method for its revelation as a spiritual force in contemporary life. Cubism, the artificial stylization of form, was developed largely by Picasso. But it was only one phase of that highly gifted painter's art. By far his finest works have been his "subject" pictures like the *Harvesters Rest-*



FIG. 361.—PICASSO. HARVESTERS RESTING. DRAWING. PRIVATE COLLECTION.

ing (Fig. 361). No artist living today has greater power to organize with economy and forcefulness, the plastic elements of space, mass and line. Possessor of the highest talents, Picasso expresses no stable point of view and no articulate philosophy. But it seems likely that we view him at too close proximity wholly to understand the major implications of his art.

Picasso's rival as leader of the Paris school of today is Henri Matisse (b. 1859). Though no Cubist, he possesses much of the Cubist point of view in regard to abstraction. His subject matter is usually no more than a device for the construction of a pattern, for its objective character is subordinated to a self-contained play of color and line. At times, however, he expresses the innate

qualities of the model. Thus dancing figures are represented in highly stylized silhouettes in which their form and bulk is reduced to a minimum, with only the curving lines suggesting the continuous movement of the dance. In most of his work the process of simplification goes so far that all space concepts are largely eliminated, leaving a flat arabesque of amazingly vivid color effects.



FIG. 362.—MATISSE. ODALISQUE. FROM THE CHESTER DALE COLLECTION, N. Y.

These are used, not for their descriptive or even structural function as in Cézanne's work, but almost entirely for their decorative value. Matisse is a magnificent composer of arresting color chords, combining harmoniously many which at first sight seem clashing and discordant. With astonishing facility he suggests concepts of space and bulk by a sort of shorthand method, in a dazzling color which by its own vitality gives reality to his themes. In his *Odalisque* (Fig. 362), the solid areas of the flesh tones are contrasted against the lively mosaic of color fragments that surround the figure. The variety and richness of the pat-

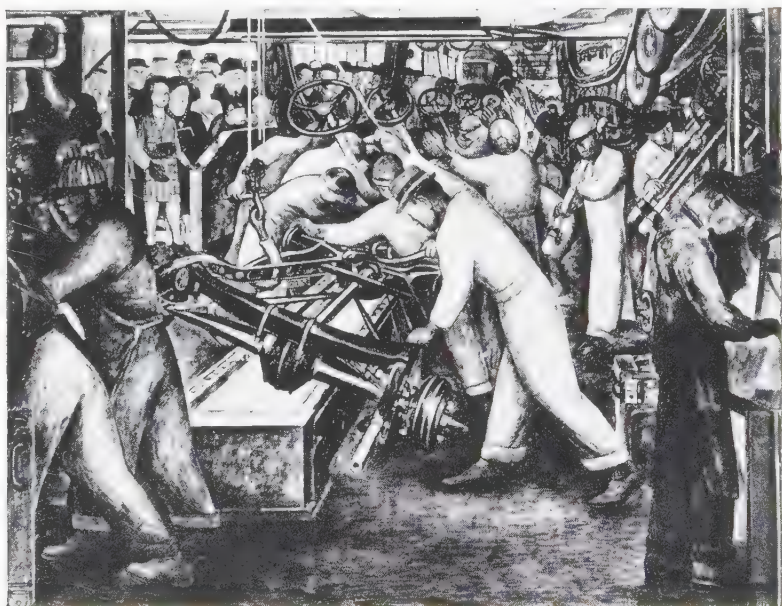
tern together with the sensuality in the treatment of the nude produce a singular exotic beauty. Through extensive use, not only of the European tradition but the decorative rhythms of Persian miniatures and Hindu and Negro sculpture, Matisse has given his art a peculiarly cosmopolitan character. Yet it is basically close to the decorative tradition always strong in French art.

It is evident from the type of painting that has arisen in the 20th century that artists have increasingly withdrawn from the direct experience of the world about them to the confines of their studio-born meditations. Matisse, for example, has refined his decoration to such an extent that though his pictures are incredibly beautiful as a feast for the eye, they yet have little of importance to say about things and people. The person who has not learned his language of color and form will be bewildered by his artificial and sophisticated arrangements. Like Ezra Pound and James Joyce in literature, he makes elaborate and brilliant use of the art of the past, but unlike Joyce he constructs from the past experience of the race no new synthesis of the present. Like so many artists in a confusing world he turns to his own esthetic vision in retreat from the perplexing spectacle of modern life. But it must be said that in recognizing his own limits he has used his talents with great intelligence.

Many modern artists, notably the Germans, have undertaken to expound the mysteries of the unstable contemporary world in a cryptic language of abstract symbols, but like so many others who have eschewed naturalistic representation, their interpretations have largely remained cloudy and inarticulate. Otto Dix and George Grosz have avoided the dangers of abstraction and have produced powerful symbols of the social disintegration and reconstruction in Germany following the war. In their mordant realism, they are the antithesis of the Cubists and abstractionists. It is safe to say that the confusion of aims and methods witnessed in the past thirty years are but symbols of a social and intellectual re-orientation of society of which the World War was the chief symptom. The hundreds of movements, schools and cliques, into which artists formed under the leadership of now one, now another idea or personality, indicate a concerted effort on the part of artists to find a solid ground upon which to build.

In the social-political philosophy of Communism, the world has seen one of the most dynamic recent efforts towards reorganiza-

tion. Under the spur of enthusiasm for a new social order, Diego Rivera and José Orozco, two Mexican artists, have revived the technique of mural painting in order to propagate their faith in a socialistic state. Founding a workers' association in Mexico City, they identified the artist with the worker. By their art and writing, they declared that art was the language of the people and should be employed to express the truths by which they live.



(Photo Lucas)

FIG. 363.—RIVERA. ASSEMBLY LINE. MUSEUM OF ART, DETROIT.

With magnificent courage and imagination, they have painted, and are painting, upon great walls, the social and cultural history of the New World. Their concern with large themes, the epic of America, the history of labor, the machine, reflects minds that seek a realistic pictorial interpretation of modern life in contrast with the European school which avoids the unavoidable in a spiritually exhausted estheticism. There is something of the quality of the Old Masters in the thorough craftsmanship and the largeness of view of these Mexicans. Rivera, the less original and

profound of the two but the more articulate, studied in Paris, mastered the profundities of Cézanne and was for a time closely associated with Picasso and his radical abstract art. His thorough knowledge of the European tradition, grafted upon that of his native Spanish-Indian background, gave him a style that was especially plastic and adaptable to the requirements of his work in the United States. San Francisco, Detroit and New York all possess large murals from his hand. Without any profound knowledge of the United States, her people and her temperament, he has yet evolved tremendous symbols of our times. In his Detroit murals (Fig. 363), he chose to represent the instrument through which that city had attained its vitality and greatness, the machine. It is more than a purely local phenomenon that he represents, however, for he sees in the machine the agency by which the whole social and political life of the world has been revolutionized. The *Assembly Line* (Fig. 363) at which hundreds of men and women labor in unison to create the automobile is a symbol of the communal enterprise of society. The life of the individual is merged anonymously with the common stream of energy directed and regimented by machinery in a system of production that makes obsolete the independent life afforded by a craft and agricultural society. These social ideas are expounded by Rivera with almost the sureness and directness with which the religious and humanistic themes were presented by Giotto and Rembrandt. They represent a nearly unique attempt of the modern artist to deal realistically with the great problems of our time.

PAINTING IN THE UNITED STATES

TRADITIONS in art require centuries to develop. The French, who have assumed the leadership in modern art, have a rich cultural tradition extending back into the Middle Ages. Their art has been deepened by an intelligent interpretation of antiquity and by the freest borrowing from neighboring nations and the Orient. Though the French are provincial in many of their ways, their artists have been the most cosmopolitan in the world. By this awareness of the whole body of western thought, they have fulfilled their own genius as interpreters and refiners of modern life.

The degree to which painting expresses and interprets the culture of France and Europe is due largely to the integration of social forces through hundreds of years. Only after maintaining the continuity of a culture over a long period can it produce symbols of itself in art. In considering American painting, it should be borne in mind that this country has not had a long uninterrupted national life, that its culture has been derived from many diverse sources and the process of integration is necessarily slow of achievement.

When, in the 18th century, the American colonies seceded from England, a new political unit was established, but it is obvious that a political organization is not the same thing as a cultural tradition. The latter is involved and complex, requiring many generations to crystallize. An integrated culture comes only after an organic way of life has been established. Even now, after nearly one hundred and sixty years, our nation is still in a formative state. With a novel political organization, with widely disparate types of culture occupying a territory almost the size of all continental Europe, the integration of our national life had, and still has, many obstacles to surmount. At first, only in New England was there a fairly stable society, based upon handicraft and agriculture. With the coming of the industrial revolution, that social unit was largely disrupted. Before the Civil War, the South with its highly profitable plantation system attained perhaps the

most urbane and promising culture the country has ever known. At a time when the nation was in a position to realize its potentialities, the Civil War inflicted a devastating blow to national morale. The decades that followed were the dreariest and most sordid that we have endured. Yet paradoxically, it was these very post-war years that witnessed the appearance of the painters who most deeply express the spirit of our national life. Painting was slower than literature to appear as an articulate and original expression for the simple reason that whereas books circulate freely and written language is almost universally comprehensible, works of plastic art were very scarce in our early days and their formal language difficult to understand even under the best of circumstances. Removed by thousands of miles from the painting of Europe, the early Americans knew next to nothing of the traditions of European art. The practical consideration of making the wilderness a habitable place was a self-evident deterrent to the creation and the patronage of the arts.

In the early years of the colonies and before the Revolution, the portrait had flourished, not so much as a work of symbolic art, but as part of the cultural furniture of great and wealthy families. The makers of portraits travelled from house to house, from city to city, with ample supplies of canvases representative of various types of people and completely painted except for the faces. They were called "limners" and "face-painters," and their pictures were known, appropriately enough, as effigies. Among them were many skilled craftsmen who had come by their art through painting signs. Created with unguided skill and patience, these truly primitive portraits are often of great homely charm in their dogged fidelity in representing the literal facts of lace and bows and texture of surfaces. Recently, these primitive pictures have come into a belated popularity for their very genuine picturesque and decorative qualities.

It is only natural that the portrait should first engross the attention of our early painters. Face paintings were in demand, and people were willing to reward the skillful artisan or artist who could produce a valuable family record. To have a good likeness of its more distinguished members was almost a family duty in the 18th century America. In the 17th century, when Holland emerged from political and military conflict, her first demand of her artists was portraits. In much the same matter-of-fact spirit,

the Americans asked to have their own images painted when they became conscious of their cultural and political attainments. More specifically, the popularity of the portrait in America was a direct heritage from the English, if one can speak of a "heritage" at a time when the colonies were simply an arm of the English nation. The English have always been patrons of portrait painting, as can be seen in the 18th century activities of Hogarth, Reynolds and Gainsborough.



FIG. 364.—COPLEY. MRS. SEYMOUR FORT. WADSWORTH ATHENÆUM, HARTFORD.

The outstanding portraitist of our Colonial days was John Singleton Copley (1737-1815), a painter who gained fame not only in America but in England as well. Trained under his stepfather and other teachers, he came by the methods that prevailed in the English school. There is something of the wooden character of the primitives in his earliest pictures, but he rapidly gained a complete mastery over his technique. He brought no innovations to the methods of his contemporaries, but with a remarkably conscientious and searching eye,

he translated the spirit of his people into the paint of his canvas. His temper of sobriety and reserve fits well the austere puritans whom he portrays. But his reserve never manifests itself in dryness or dullness. It is somewhat relaxed in the lively portrait of *Mrs. Scymour Fort* (Fig. 364). The redoubtable Mrs. Fort appears to us in the full vigor of her moral and physical being. With characterful strength and humor, she seems a witty and gentle mistress of the sphere she dominates. It is rare to find in either English or American portraits of the 18th century so honest and forthright a treatment of character. Copley never makes his subjects more noble or beautiful than they are, but he had the happy faculty of eliciting from them their most essential character. Being a Loyalist, he withdrew to England on the eve of the Revolution in his middle thirties, ending his Colonial career.

There he found patronage and honor, but his closer relation to the English tradition of art did not improve his style.

In the late 18th century, as now, Europe offered strong inducements to the American artist. There the schools and the patronage and the art could be found that are so important to the student and the mature master. Benjamin West (1738-1820) spent the



FIG. 365.—STUART. MRS. PEREZ MORTON. MUSEUM OF ART, WORCESTER, MASS.

whole of his career in London, being the first American painter to gain European prestige. Though a member of the English school, he, as friend and teacher, assisted all his fellow countrymen who went to England to study. Among his American friends was Gilbert Stuart (1754-1828), probably the ablest painter of faces of the time. Everyone is familiar with his portrait of Washington in the Boston Museum of Fine Arts, at least from its use on our most common postage stamp. The stoic nobility of that portrait has been accepted as the most characteristic feature of our first president. But the Washington in the Vaughn Portrait is a

far more subtly realized conception of the intimate character of the gallant and venerable country gentleman. Neither is a great portrait of high interpretative merit, but both are admirable memorials to a great spirit. As historical documents, the portraits of our early period are of inestimable value, far overshadowing their artistic significance. Mather has pointed out Stuart's excellence as a painter of women. The portrait of *Mrs. Perez Morton* (Fig. 365) in the Worcester, Massachusetts, Gallery is his masterpiece. Of all the masters living at the time, only Goya could have made so penetrating an analysis of character interpreted in the most imaginative manner. For a brilliant illumination of the most intimate depths of the Anglo-American type of woman, it has yet to be surpassed.

There was little if anything peculiarly American about the early face-painters. Their manner and method was derived almost wholly from the English, but as time went on painters appeared who had come under the influence of the French. The professional and highly disciplined style of David was communicated to Rembrandt Peale and S. F. B. Morse (1791-1872), both artists of great talent. The weight of David's style was highly beneficial as a corrective to the superficial and easy decorative effects of the English. S. F. B. Morse could have had a splendid career as a painter had he not been side-tracked by the popular enthusiasm that resulted from his invention of the telegraph. His portrait of Lafayette, hanging in the City Hall, New York, is a grand full-length picture of surprising depth and power.

The Romantic Movement, which had seen the elevation of landscape painting to first importance in Europe through Constable, the Barbizon painters and others, was profoundly felt in America. The New England landscape was celebrated in the verse of Whittier as early as 1831. The nature poetry of Wordsworth was as fully appreciated in America as in England. As portraiture began to decline in the period before the Civil War, the landscape came more and more to occupy the talents of our painters. Thomas Cole (1801-48), taught by an itinerant face-painter on the frontier of Ohio, was deeply impressed by the wild and romantic aspect of the untamed mountains and forests. Working in the Catskills and along the Hudson River, he, with others, formed the first group of landscape painters in America.

This group was known as the Hudson River School. Largely

derivative from the Dutch 17th century art of Ruysdael, these painters were at first analytical and groping in their efforts to expound the rich and varied scenes of the countryside. None of them realized intuitively the human import of the landscape as did Corot. Even to this day, few people make the distinction between scenery and landscape; the one is the chance web of the free forces of nature, the other the conscious pattern of nature effected through the plowed field, the enclosing boundaries of wall and fence, articulated by roads, canals and bridges. Nature submitting to the creative will of man to nourish and clothe him is the essence of the landscape. Such a concept has never been adequately expressed by American artists, probably because the vast expanse and richness of our soil and the comparative newness of the country has made the land an object of plunder and ruthless exploitation instead of philosophic contemplation. Our wealth of land and natural resources has been the undoing of the landscape as such. Where long tradition and necessity have created a landscape in England and Europe, America has been reduced in vast areas to desert. The scenery of national parks and unarable mountains stands in our minds for landscape. The European romantic landscape came to the attention of Americans while they were yet in the frontier stage of development and culturally unprepared to understand its full implications. The result was the half-formed and sentimental concepts of the Hudson River School.

That we have not had landscapists of the highest order is accounted for by the fact that we have yet to attain the integrated and humanized culture that produces the landscape in actuality. But the deep feeling of American painters for nature in the widest sense of the term has made landscape painting our most distinctively native art. Ryder, Homer, Inness and a score of others have treated the American scene with great insight and power, ranging in expression from the heroic mood of the 17th century Claude Lorrain and Poussin, and the tender sentiment of the romantic passion, to abstractions bordering upon Cubism among some of the more recent painters.

The development of American landscape painting owes much to Winslow Homer (1836-1910), who brought to his subject a singularly sensitive and intelligent talent. At a time when most American painters were absorbed by showy sentiment and patriotic bombast, or almost wholly enthralled by the mellowness of

Old World masterpieces, Homer was an outspoken realist. With pragmatic directness, he studied the waves and the sky, the fisher-folk and the Northern trappers. There is an almost impersonal deliberation in his dispassionate record of out-of-door life. Largely without reference to the knowledge and the practice of centuries of painting, he contrived honest studies of immediate experience, finding for his pictures the colors that described veraciously the actual ones appearing in nature. At the time Manet was shocking Paris with his original use of color, Homer, without any self-consciousness, was exercising the greatest freedom in its use. But Homer's art lacked the depth and breadth of the Frenchman's. His painting, for all of its vigor and freshness, remains in the sphere of illustration. He had a forceful and virile style which expressed what he had to say without hesitation or gropings. His experiences of nature were so deeply felt and his integrity so great that there is no false note of half-realized sentiment or idea to mar his pictures. As Mumford remarks, the significance of Homer lies not so much in the quality of his pictures as in the fact that he accepted the life about him and made what he could of the sea-coast with its weather-bronzed faces reflecting the struggle and the homely decencies of heroism and defeats. He established the familiar native scene in all its aspects as the subject with which the artist should rightly concern himself. To Americans of this time, accustomed as they were to look to the European past for their models, this was no small contribution to a new culture.

In Albert Pinkham Ryder (1847-1917), American painting finds its profoundest spirit. He shares with Whitman and Melville the almost undisputed primacy in our artistic tradition. Furthermore, with his two literary contemporaries, Ryder assumes a place of rank not confined to the sphere of his own country but in the art of the western world. In relation to the development of art in Europe, he belongs unquestionably with the Romantic school.

In nearly every respect Ryder's art differs from Winslow Homer's. Where the latter describes veraciously the particulars of place and events, Ryder gives expression to his inner experiences. Of all his landscapes and marines, only three have definite reference to a specific place. He realized, more fully than any other American painter, that the sphere of the artist is the mind, which transforms the raw stuff of the external world into

articulate meaning. Surface appearance means nothing to him except as it evokes thought too deep for words. His groping efforts to attain comprehensible expression of that thought are reflected in his painfully laborious methods of painting. Months and even years after a canvas had been almost complete, he would still revise it, often calling in those that had been sold to make



FIG. 366.—RYDER. TOILERS OF THE SEA. ADDISON GALLERY, ANDOVER, MASS.

final additions and amendments. In explanation of his desultory methods he said, "Have you ever seen an inchworm crawling up a leaf or twig, and there clinging to the very end, feeling for something, to reach something? That is like me. I am trying to find something out there beyond the place on which I have a footing." By concretion and concentration, he packs into his art infinitely more than is seen or heard by the senses. Something of the resounding poetry and music of Chaucer, Shakspeare and Wagner, whom he loved, emerges from the ghostly pale lights

of his marine nocturnes. He gave poetic titles to his pictures, like *Toilers of the Sea*, and the *Waste of Waters in their Home*, and even wrote verses to accompany them. Though many of his canvases are inspired by literature, they are never mere illustrations any more than were those of Delacroix.

In all of his paintings, one feels the presence of the mysterious forces that lie in the unfathomed depths of nature, forces that Melville symbolized in the Great White Whale. As for Melville, the sea had a peculiar fascination for Ryder as a symbol of the incalculable destroyer and preserver. During his boyhood in New Bedford, the whaling port where since the 17th century men had wrested a living from the treacherous sea, he must have absorbed the tragic beauty of the fathomless ocean. Its austere mystery is seen in his *Toilers of the Sea* (Fig. 366). With the simple design of a smudgy fishing vessel outlined against the moonlit sky swept by long slow clouds, he gives utterance to the solitude of the soul of man. The illimitable plane of the sea, the inscrutable breadth of the sky, are conveyed by the coruscated light emerging from the enamelled depths of the canvas.

Ryder profoundly spiritualizes his themes, whether they are derived from literature, legend or the homely commonplace of daily existence. Hearing of a waiter in his brother's hotel who had committed suicide upon losing all his savings on a race-horse, Ryder painted the picture called *Death on the Race Track*. The skeletal rider, scythe in hand, circles interminably a desolate race track on his ghostly horse. Out of touch with the art of Europe, he found in his plodding experimental methods the means to express the part of experience that eludes direct statement, that must be approached through parables. Though a mystic and poet, his art touches with directness and sureness the commonplace and elemental experiences of humanity.

Somewhere between the romantic naturalism of Winslow Homer and the mysticism of Ryder, the realism of Thomas Eakins (1844-1916) finds its place. Unlike the other two, Eakins had founded his technique in the tradition of European painting through study in one of the most celebrated academic studios in Paris. He had a surprising intelligence in regard to his artistic training, recognizing that what he had to learn was simply the technique of painting, how to prepare a canvas and mix pigment and the craft of picture-making. It must have been obvious to him, even in his

youth, that his highly competent masters had little or nothing to teach him as to what he should paint, or how his subjects should be interpreted. When he returned to this country, he set about soberly and sensibly to paint the scenes about him that he knew intimately: portraits of his friends, boat races, prize fights, the interiors of his fellow-artists' studios and the demonstration clinics of the hospitals. There is something in Eakins of the Old Masters, both in the learned technical methods he followed and in the self-assurance of his approach to his work. The searching realism of his painting and his friendship with the celebrated scientists of his native Philadelphia attest to his intense interest in scientific thought. "All the sciences," he said, "are done in a simple way; in mathematics, the complicated things are reduced to the simple things. So it is in painting. You reduce the whole thing to simple factors; you establish these and work out from them, pushing them toward one another. This will make strong work. The Old Masters worked this way." Walt Whitman, in whose *Democratic Vistas* is recorded the same acceptance of the American scene that characterizes Eakin's art, said "I never knew of but one artist and that's Tom Eakins who could resist the temptation to see what they think they ought to see rather than what is." Certainly no painter was ever freer from pose and affectation than he. The popular American taste has always been more than tinged with the English concept of art as a decorative embellishment of life. For Eakins, it was no such matter any more than for Ryder. He saw in it an instrument of almost scientific precision to formulate enduring monuments of his experience.

Everything Eakins painted has the authority of one that never questioned the validity of his conscious power to *see* and to understand. In the solid masses of his forms are the same rightness and factualness, the direct contact of mind with things, that is found in Cézanne's pictures. Indeed the portrait of Arthur B. Frost, in the collection of the Pennsylvania Museum of Art in Philadelphia, painted in a wholly different technical idiom from the Frenchman's, might almost have been done by Cézanne, so powerfully does the personality emerge from the planes delineating the solid masses of the head.

Like Whitman, Eakins had the widest interest in all life about him. His pictures of the prize ring are as intensely studied as

his monumental paintings of the Gross Clinic and Dr. Agnew's Clinic. Perhaps his most dramatic work, both in subject and



(Courtesy of the Pennsylvania Museum of Art, Philadelphia)

FIG. 367.—EAKINS. BETWEEN ROUNDS.

treatment, is called *The Salute*. A prize-fighter, nude except for shoes and loin-cloth, turns with lifted arm and face to receive

the roar of adulation from the crowd. The exact moment is recorded when the lithe and muscular athlete, trained to an edge, holds the attention of the frantic mob. Calm and tense, he seems to arrest for an instant the torrent of applause that rushes upon him. Somewhat less intrinsically dramatic, *Between the Rounds* (Fig. 367), painted a year later in 1899, is broader and more monumental in design. The extensive background of the action is simplified by the natural accents of the horizontals and the subdued illumination of the scene itself. The white flesh of the boxer resting in his corner glows warmly against the murky atmosphere. The arrangement and the action seem as spontaneous as reality, the telegraphic reporter attentive at his key, the seconds busy with their fighter. Eakins never makes his figures more than they are, or his drama more intense than the actuality. There is a sober poetry about his uncompromising realism that escaped the men of his own time who found his art too severe as the French found that of Courbet and Daumier lacking in grace and charm. The great integrity of these men has been recognized, in our own time, for what it is—the highest gift of the artist.

Eakins exercised great influence upon his followers and his presence is felt more and more with the years. The Philadelphia group including Luks, Glackens, Henri and Sloan came under his spell. And George Bellows (1882-1925) more recently has reflected his gusto and boldness notably in his painting and lithographs of prize fighters. His several versions of the climax of the Dempsey-Firpo fight, showing Dempsey being hurled through the ropes are slashing reminiscences of the robust days of the prize ring.

The development of Impressionism in France which took place during the time of Homer, Ryder and Eakins is not reflected in the work of these Americans, though Eakins was a student in Paris when Monet and Manet were formulating their styles. No one can regret that Eakins abstained from attempting to master a new idiom of expression before he had realized the full possibility of a tried one. Sargent, who exploited the potentialities of the new style with brilliant facility and daring, produced only the most superficial decorative effects. Of all who have essayed the Impressionistic style, only the French have found it a powerful mode of expression.

From the outwardly uncongenial atmosphere of the American

life following the Civil War, so admirably characterized by Lewis Mumford as the Brown Decades, an ever-increasing group of artists found haven in the capitals of Europe. Lack of patronage and prestige forced less hearty spirits to seek recognition and guidance in countries with long-established traditions in the arts. Mary Cassatt (1845-1926) developed under French Impressionism a fluent and delicate style inspired largely by Degas. Her portraits of women and children are especially fine, but she must be

considered a French painter since there is almost nothing in her manner of working or her expression to suggest her American origin.

By far the most celebrated American painter is Whistler (1834-1903), though by no means the greatest. Receiving his early training in Paris, he exhibited with the Impressionists and the moderns of the time who were in revolt against the stultified archaisms of the Academy. He maintained that art was its own justification and should not concern itself with narration, description or morality. He professed the theory of art for art's sake,



FIG. 368. WHISTLER. BATTERSEA BRIDGE. TATE GALLERY, LONDON.

by which he no doubt meant that painting should be lovely and charmingly poetic. At any rate, his art is that and little else. He called his pictures *Nocturnes*, *Symphonies*, *Arrangements* and *Harmonies*, probably chiefly to dumbfound and annoy his critics. Actually these are fairly adequate descriptive titles. His *Battersea Bridge* (Fig. 368) is characteristic of his taste in orchestrating the pale tonalities of the evening light over water. His use of the expressive silhouette was derived from the methods of Japanese prints which had so great an appeal to the French Impressionists. The influence of Oriental art upon his work may be seen in his famous *Portrait of his Mother* in which the

space is subordinate to a delicately designed surface pattern. In etching, Whistler developed a brilliant and elaborate technique. His prints are exquisitely produced and of great intrinsic beauty. In England, where he spent most of his life, he entered with enormous gusto into the artistic controversies of the time. The scene is suggested by Suzanne LaFollette, "The art of Victorian England was literary, and sentimental and dull, and the pall of bourgeois prudery weighed heavily upon it." The Pre-Raphaelite movement was disintegrating into pale and affected sentimentalities. Against the enthroned complacency of English academicism and Philistinism, Whistler threw the impact of his devastating wit. His rapier thrusts of irony and scorn belong with his art to *fin-de-siècle* England.

The development of Impressionism in France was inevitably felt by the painters on this side of the ocean. Twachtman, Hassam, Sargent, Glackens, Sloan and a score of other able painters were profoundly affected by French luminists. The work of these men has not been invested, however, with the great imagination and penetrating realism of their predecessors Ryder and Eakins. The powerfully constructed art of Cézanne was first appreciated in America by Maurice Prendergast. Perhaps the same intelligence that gave the latter a ready understanding of Post-Impressionism led him to evolve a style quite different from Cézanne's but founded in the same desire as his to stabilize pictorial design. He became a highly imaginative and decorative figure painter, constructing his forms by broad touches of pure colors to create a glowing mosaic of great charm and depth of feeling.

The spectacular and bewildering work of the modern School of Paris was introduced to America in the famous New York Armory Show in 1913. Here for the first time the paintings of the *Fauves* or Wild Beasts, as they were called—Matisse, Picasso, Braque—became known to the American public. Art dealers and enthusiasts widely publicized the theory of free expressionism that lay back of the abstract treatment of the modern School of Paris. While the often grotesque effort to imitate the French produced a good many faddish and fatuous paintings, the trend attained the dignity of a movement in the intelligent and sensitive work of men like Demuth, Marsden Hartley and Sheeler. It is reflected in the brilliant abstract and symbolic painting of Georgia O'Keefe.

In more recent years, the tendency has been definitely away from

foreign styles to a return to the dominant tradition in American art: to a realistic interpretation of our native landscapes and our peculiar cultural *mores*. The need for monumental mural painting, which the architect Richardson recognized as far back as 1876 when he called John La Farge to decorate Trinity Church with frescoes, has at last been admitted. The frequent employment of the Mexican muralists Orozco and Rivera to decorate walls all over the country has been a sign of a vigorous demand for a new style in painting for public and semi-public buildings. In the muralist Thomas Benton (b. 1887), America has a decorative painter of great talent. With refreshing disregard for the Greco-Italian abstractions of Agriculture, Industry and Democracy that



(Courtesy of Whitney Museum of American Art)

FIG. 369.—BENTON. THE ARTS OF LIFE IN AMERICA. WHITNEY MUSEUM, N. Y.

too often obtrude themselves upon the walls of our public buildings, he has evolved an original and forceful style. There is nothing pale or anemic in his bold murals. They relate graphically the various aspects of American culture and history in staccato rhythms of angular forms that are psychologically and plastically arresting (Fig. 369). While his compositions are not always wholly in harmony with their architectural setting and do not conform to the methods of surface decoration traditionally observed by

muralists, they are none the less animated and vigorous symbols of our national life.

In easel painting, Hopper and Burchfield continue to produce revealing studies of our countryside and our urban environment. Notable in recent years are the trenchant canvases of Grant Wood. Painting with a jewel-like precision reminiscent of primitive art, he has made many studies of the landscape of his native Iowa farms. His grasp of character in whatever he essays is comprehensive and positive. A masterful sense of form and design makes his *Threshers' Dinner* (Fig. 370) a powerful expression of a familiar scene in the western prairies. It is characterized by a design as forthright and unaffected as the subject itself as



(Courtesy of Whitney Museum of American Art)

FIG. 370.—WOOD. WATER COLOR STUDY FOR A MURAL. DINNER FOR THRESHERS. DETAIL. WHITNEY MUSEUM, N. Y.

can be seen even in our detail. By removing the obscuring walls of the farmhouse, he reveals the panoramic view of the dinner in its entirety much as Giotto did, or a modern stage director does when purely nominal contingencies of realism conflict with the relating of action essential to the complete realization of the drama. Wood records the scene with sobriety and directness; the straggler who completes his washing-up on the porch, the farmers seated about the table on all available chairs including a piano

stool, the women serving the men and toiling over the hot kitchen stove. The artist has informed himself so thoroughly of the behavior of his people, the way they move and think, he knows so intimately the character of the farmer and the world in which he lives that he is able to formulate the exact pattern that makes the scene a completely integrated psychological and plastic unit.

The authentic power that is felt in Grant Wood's pictures, like his *American Gothic* and *Daughters of Revolution*, arises from his identity with his subject. He does not stand aloof from his scene, finding in it material for an interesting formal composition, or a theme that fits well with a preconceived pictorial formula. Like Eakins, he brings to his art a tremendous awareness of things, a profound respect for the realities that lie inherent in the forms he sees. His technique is but an instrument of communicating these realities. When the artist "rises above" his world and attempts to pull himself up by his boot straps, then stagnation and futile gesturing inevitably result. Every artist worthy of the name has recognized that nature is the fountain-head of art. No artist can live upon art. And unless his vision is replenished by the life-giving forms that abound in the infinite reservoirs of Nature, his art will perish.

The American artist has shown abundant evidence of his respect for the stubborn facts of reality, and by shaping these facts into articulate patterns of experience, he has created intelligible symbols of his life. In so far as he has done that, he has identified himself with the masters who created the great tradition of Western art.

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NOTE: The main divisions of the bibliography correspond approximately to the divisions of the book into architecture, sculpture and painting, with subdivisions for the chapters.

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GLOSSARY

The references to figures are not exhaustive.

- Abacus.* A slab forming the crowning member of a capital. Figs. 8, 9.
- Absidioles.* Small apse-like projections from the ambulatory and transepts of a church. Figs. 40, 56.
- Acanthus.* A plant whose leaves are reproduced in stylized form on the Corinthian capital. Fig. 12.
- Aerial perspective.* The indication in pictorial art of the effect of light and atmosphere upon distant objects, giving thereby an impression of depth in the picture or relief. Fig. 263.
- Akroterion.* Ornament on the peak or corners of a classic temple pediment. Figs. 6, 147.
- Ambulatory.* Passageway around the apse of a church. Figs. 40, 56.
- Applied order.* Column and entablature attached to a wall or pier; decorative rather than structural in function. Figs. 19, 20, 69, 72, 77.
- Apse.* Semicircular or polygonal recess, covered with a half-dome or other vault; more particularly, the semicircular termination of the choir of a church. Figs. 30, 32, 40, 56.
- Aqueduct.* A channel or conduit to conduct water, often supported on masonry arches. Fig. 27.
- Arcade.* A series of arches resting on piers or columns. Figs. 33, 41.
- Arch.* A structural device, semicircular or pointed in shape, formed of separate truncated wedge-shaped blocks to span an opening. Fig. 2.
- Architrave.* The horizontal beam or lintel that is the lowest member of the entablature in the classic orders; more generally, a horizontal member spanning the distance between two vertical ones: a lintel. Figs. 8, 9.
- Arris.* The sharp ridge between two flutes of a Doric shaft. Fig. 8.
- Atrium.* The open outer court of a Roman house, usually surrounded by a roofed gallery, Fig. 25; the open court before the narthex of a Christian basilica or church. Figs. 30, 50.
- Baldacchino.* A canopy over a tomb or altar. Fig. 81.
- Balustrade.* A hand rail, usually supported by small pillars. Figs. 82, 83, 108.
- Baroque.* Literally irregular or fantastic; applied to the art of the 17th and early 18th centuries; a style in which an artistic medium is arbitrarily handled to produce striking effects. Figs. 85, 86, 224, 226.

- Barrel vault.* A vault that is semicircular in section. Fig. 21A.
- Basilica.* In Roman architecture, a rectangular building with nave and aisles used for business and judicial purposes; in Christian architecture, a church of similar form, the longitudinal axis being the most important. Figs. 30-33.
- Bay.* An opening between two columns or piers. Fig. 8; more generally, a principal compartment or unit which is repeated to form an architectural design. See discussion of the *Church at Vignory*.
- Beam.* A horizontal piece of wood, stone or metal, used in the frame of a building: a lintel. Fig. 1.
- Broken pediment.* A pediment in which the raking cornice is not continuous: much used in baroque architecture. Fig. 85.
- Buttress.* A mass of masonry employed to counteract the lateral thrust of an arch or vault. Fig. 2.
- Campanile.* Italian word for bell tower; usually free-standing. Figs. 32, 43, 50, 67.
- Cantilever.* A horizontal member attached only at one end to a vertical support, its stability depending upon the tensile strength of the material. A structural principle employed chiefly since the advent of steel as a constructive medium.
- Capital.* The part of a column or pilaster that rests on the shaft, acting as a transition from it to the architrave or arch, and usually decorated. Figs. 8, 9, 18, 20.
- Cartoon.* A full-size preliminary sketch for a painting. Figs. 280-281.
- Cartouche.* An ornament, irregular or fantastic in shape, on which armorial bearings or symbols are sometimes carved; frequently found in baroque architecture. Figs. 85, 226.
- Caryatid.* A support in the form of a female figure, taking the place of a column. Fig. 16.
- Cella.* The principal chamber of a classic temple in which the cult statue stood: sometimes used with references to the entire walled portion of the building surrounded by the peristyle. Fig. 7.
- Centering.* The timber framework supporting an arch or vault in the process of construction and removed after the insertion of the keystone which makes it self-supporting.
- Chevet.* French, meaning literally pillow; term applied to the apsidal end of a French church, and including the semicircular or polygonal vault over the end of the choir, the ambulatory and the absidioles. Fig. 56.
- Chiaroscuro.* Italian, meaning literally light-dark; applied to contrasts of light and shade by means of which various elements in a painting, statue or architectural design are distinguished from one another.
- Choir.* Specifically, the part of a church where the singers are accom-

modated; in general, the arm of the cross between the transepts and the apse. Sometimes referred to as the chancel. Figs. 44, 56.

Ciborium. See *Baldacchino*.

Cire perdue. French, meaning literally "lost wax." A method of casting statues in bronze or other metal, the original figure being modelled in wax over a core, the wax flowing out of the space between the core and the mould when melted by the hot metal which takes its place.

Clapboard. A flat piece of wood applied to the exterior of a building in such a way that its lower edge laps over a similar piece immediately below it to make a weather-proof joint. Fig. 107.

Clearstory. The part of the elevation of a church that rises above the aisle and ambulatory roofs and is pierced with windows to illuminate the interior. Figs. 31, 41, 51, 59.

Colonnade. A series of columns connected by lintels, as contrasted with an arcade.

Colonnette. A diminutive column.

Column. A vertical support, usually circular in section, with a base, shaft and capital; distinguished from a pillar by the fact that there is a calculated ratio between its height and diameter. Figs. 8, 9.

Compound pier. A pier which is built up of various members, such as pilasters, shafts, colonnettes, etc., applied to a masonry core, the applied members acting as supports for the arches and ribs of a vault. Figs. 49, 59.

Console. A bracket; a projecting member to support a weight, usually formed of scrolls or volutes in an S-shape; also known as a corbel. Fig. 142.

Corbel. A block of stone projecting from a wall, often carved, and serving to support cross beams, etc.

Corbel table. A projecting course of masonry resting on corbels which are often connected by small arches. Figs. 49, 50.

Cornice. A horizontal projecting member crowning an entablature or wall; also any crowning moulded projection. Figs. 8, 9, 70, 124.

Courses. The horizontal layers of stone or brick in masonry construction.

Crocket. A carved projection from the edge of a gable, pinnacle, flying buttress, etc., in a Gothic building; usually in the form of a leaf. Fig. 58.

Crossing. The space formed by the intersection of nave and transepts in a church of cruciform plan. Figs. 40, 56.

Crown. The highest point in an arch or vault; the keystone. Fig. 2.

Cupola. A dome or hemispherical covering; also applied colloquially to any small structure above the roof of a house. Figs. 24, 36, 81.

Dentils. Small, projecting blocks, suggesting somewhat a row of

- teeth, that appear in Ionic and Corinthian cornices. Fig. 18, D, E, F.
- Diaphragm walls.* Walls whose primary purpose is to stiffen construction that is liable to destruction by intrinsic weakness or strain. See discussion of *Sant' Ambrogio at Milan*.
- Domc.* A hemispherical or polygonal vault. See also *Cupola*. Figs. 24, 30.
- Drum.* In a column, the circular discs that make up the shaft; Fig. 18, A, B. Also used with reference to the circular or polygonal wall on which a dome is placed.
- Eave.* The lower part of a roof projecting beyond the wall underneath.
- Echinus.* From a Greek word meaning sea-urchin. The convex member of a capital that supports the abacus, usually parabolic or hyperbolic in profile. Fig. 8.
- Egg-and-dart.* A row of alternate ovoid and pointed members, usually carved and used as a decorative moulding. Figs. 9, 187.
- Elevation.* The vertical arrangement of the elements in an architectural design.
- Engaged column.* A member somewhat like a column but projecting from a wall, of which it is usually a part, instead of free-standing. Also known as an applied column. See *Applied order*. Figs. 19, 20.
- Engraving.* The process of cutting a design with a sharp instrument on a copper plate from which impressions are made on paper, after being inked. Also applied to such an impression. Figs. 300, 302.
- Entablature.* The art of a building of lintel construction above the columns, extending to the roof or to a story above. Figs. 8, 9.
- Entasis.* A slight, almost imperceptible swelling in the profile of a column shaft. See discussion of the *Doric order*.
- Etching.* To engrave a metal plate by the corrosive action of an acid; also by direct application of a sharp instrument, when it is known as dry-point; also applied to the impression made on paper by a plate so prepared after being inked. Fig. 320.
- Extrados.* The outer face of an arch or vault. Fig. 2.
- Façade.* One of the faces of a building, usually that containing the main entrance. Figs. 53, 57, 58, 68.
- Fillet.* A narrow flat surface separating two mouldings; the surface between two flutes of an Ionic shaft. Fig. 9.
- Flutes.* The vertical grooves in the shaft of a column, usually semi-circular in section or in the form of a segment of a circle. Figs. 8, 9, 13, 18.
- Flying buttress.* A bar of masonry, supported by an arch or arches, at right angles to the longitudinal axes of the interior spaces of

a Gothic church whose vaults it supports by carrying their lateral thrusts over the side-aisle or ambulatory roofs to vertical piers rising from the outer walls. Fig. 55.

Free-standing. A term applied to a column or carved figure which is not part of a wall or background.

Fresco. Italian, meaning literally fresh. A method of painting upon wet plaster with colors of pigment mixed with water which sink into the plaster and dry with it; also used with reference to a painting executed in the foregoing manner.

Frieze. An extended horizontal band, often decorated with carved figures and mouldings; the portion of an entablature lying between the architrave and the cornice. Figs. 8, 9.

Gable. The triangle formed by the end of a ridged roof and the similarly shaped wall enclosed by the horizontal and raking cornices; called a pediment in classic architecture. Figs. 6, 8, 88, 95.

Girder. A horizontal beam that supports a vertical load and bears vertically upon its supports.

Gothic. Term first applied to medieval art during the Renaissance in a derogatory sense. Now used to designate the art of the later Middle Ages, after the Romanesque.

Grille. A grating or screen, usually of iron or a perforated stone slab, but sometimes of wood.

Groined vault. A vault formed by the intersection of two barrel vaults of equal span, either semicircular or pointed, the diagonal lines of the intersecting under surfaces being the groins. Figs. 21, 54.

Gutta. From the Latin *gutta*, or drop. The small cylinders or truncated cones pendent from the mutules and regulæ of the Doric entablature. Fig. 8.

Half-timber. A type of construction in which the spaces formed by the wooden beams of a building are filled with brick or clay, the beams being left exposed. Fig. 95.

Haunch. The part of an arch or vault where the lateral thrusts are the strongest, about midway between the springing and the crown. Fig. 2.

Hipped roof. A roof with inclined sides and ends, the diagonal lines formed by the intersecting planes being known as hips. Fig. 108.

Iconography. The traditional manner of representing a subject in art, governed by more or less fixed rules.

Illuminated manuscript. A book in which the text is written by hand and illustrated with drawings or small paintings. Illumination was practised extensively during the Middle Ages and declined after the growth of easel painting in the Renaissance.

Impost. The horizontal member from which an arch springs. Fig. 2.

- Intrados.* The inner face of an arch or vault; also known as the *soffit*. Fig. 2.
- Isocephalism.* A convention by which all the heads in a row of figures are placed arbitrarily at the same height. Figs. 161, 186.
- Joist.* A horizontal timber in a floor or roof.
- Keystone.* The central voussoir of an arch which renders it stable when put in place. Fig. 2.
- Law of frontality.* A convention observed in archaic art in which a straight vertical line bisects the figure from the front, there being no movement to either side. Figs. 143, 146.
- Lean-to.* A supplementary structure added to a building, usually covered by a roof in a single slanting plane. Fig. 107.
- Linear perspective.* The art and science of suggesting depth in space in pictorial art, based on observation of the fact that receding parallel lines seem to converge on the horizon line. One of the first systems of linear perspective was evolved by Brunellesco.
- Lintel.* The horizontal beam in the post and lintel system, Fig. 1; also used with reference to an architrave.
- Meander.* A motive employed in classic mouldings, consisting of straight lines intersecting and forming various patterns. Also known as Fret and Greek Key.
- Metope.* The panel between two triglyphs in a Doric frieze, Fig. 8; originally an opening between two roof joists; sometimes carved, Figs. 148, 155, 160.
- Miniature.* A small drawing or painting in an illuminated manuscript. Figs. 242, 243, 245.
- Modillion.* A console or bracket used to support a cornice. Figs. 18, 19.
- Monolith.* Literally a single stone. Used to distinguish a column shaft cut from a single block of stone from one built up in drums. Figs. 16, 19.
- Mosaic.* A method of wall decoration in which designs are formed by cubes of colored glass or marble, set in wet plaster which holds them firmly in place on hardening.
- Moulding.* A projecting or depressed surface, either plain or decorated, employed to ornament a wall surface, cornice, capital, etc. Figs. 13, 70.
- Mullion.* A vertical member dividing a window into separate lights, Fig. 72; also used to support the glass in a stained glass window.
- Mural.* Of or pertaining to a wall; fresco paintings are sometimes called murals. Fig. 263.
- Mutules.* Projecting inclined blocks on the lower face of a Doric cornice from which guttæ hang. Fig. 8.
- Narthex.* The entrance porch of a Christian basilica or church, usu-

ally colonnaded and originally opening directly into the atrium, Fig. 30; sometimes in two stories, Fig. 50.

Nave. The chief interior division of a church in Latin cross form, corresponding to the long arm but separated from the side aisles, Figs. 30, 40, 56; also applied to the corresponding portion of a Roman basilica.

Nave arcade. The series of arches and columns separating the nave of a church of Latin cross form from the side aisles.

Necking. The band between the shaft and echinus of a classic column. Figs. 8, 9.

Niche. A recess in a wall, as a rule either circular or rectangular with a circular head, in which statuary may be placed. Figs. 23, 84.

Obelisk. A tapering shaft of stone, generally rectangular in plan and with a pyramidal peak; much used by the Egyptians as memorials. Figs. 23, 79.

Order. A system governing the design of column and entablature in classic architecture. There are two main orders, the Doric and Ionic, and one subordinate one, the Corinthian, in Greek architecture. To these, the Roman added the Tuscan, somewhat resembling the Doric, and the Composite, a combination of Ionic and Corinthian. Figs. 8, 9, 18.

"Organic architecture." An architecture involving the use of vaults, supported by piers, buttresses and ribs, the form and arrangement of which are dictated by the part they play in maintaining the stability of the vaults.

Palmette. A certain type of stylized foliate form employed in classic mouldings; also known as *Anthemion*. Fig. 13.

Pastel. A picture made with a crayon of pigment mixed with some heavy binding medium such as gum; often classed with painting. Fig. 356.

Pediment. A triangular space framed by a horizontal and raking cornices; in classic architecture, the space over the peristyle at the end of a temple, Fig. 6; in Renaissance architecture, used as a repetitive motive for window decoration. Fig. 76.

Peristyle. A continuous range of columns, bearing architraves or arches, surrounding the exterior of a building or the interior of a court. Figs. 6, 14, 71.

Perspective. The means by which three-dimensional pictorial effects can be suggested on a two-dimensional plane. See also *Aerial perspective* and *Linear perspective*.

Pier. A vertical support of masonry, built up in courses, distinguished from a column by greater massiveness and by a shape other than circular. Figs. 41, 49, 51, 59.

- Pietà*. Italian, meaning literally pity or compassion. A representation of the Virgin holding the body of the dead Christ. Figs. 253, 296.
- Pilaster*. A flat rectangular member, projecting slightly from a wall or pier of which it forms a part, and furnished with a capital, base, etc., in the manner of an applied column, from which it differs chiefly in its rectangular section. Figs. 20, 69, 72, 82.
- Pillar*. A vertical, isolated mass of masonry used as a support that is not strictly speaking a column or a pier; generally employed to designate any vertical support, usually incorrectly; also applied to memorial shafts.
- Pinnacle*. A small decorative turret, surmounting a buttress, tower, etc. Figs. 58, 88.
- Plan*. A diagram indicating by conventional means the general distribution on the ground or some specified level of the various parts of a building. Figs. 7, 25, 30, 35, 40, 48, 56, 129.
- Podium*. A continuous base or pedestal for a monument or building. Figs. 17, 19.
- Pointing*. A mechanical process employed by sculptors to reproduce a clay or plaster model in stone, points on the model being indicated in the stone block by holes drilled in it to the proper depth.
- Portico*. An open vestibule or porch, its roof supported by a colonnade or an arcade on one side. Figs. 23, 68.
- Post and lintel*. A structural system or unit of construction in which vertical supports bear the load of horizontal beams.
- Pulvin*. The inverted truncated pyramid that appears between a Byzantine capital and the arch it supports. Also known as a *Stilt-block*. Figs. 33, 38, 241.
- Putto*. Italian, plural *putti*, meaning boy. Applied to the cherubs that appear in Italian Renaissance painting and sculpture. Figs. 204, 206, 270.
- Pylon*. The monumental gateway to an Egyptian temple; also the massive walls separating one court of an Egyptian temple from another; by extension, any gateway of classic design. Fig. 4.
- Quoins*. Stones or blocks, slightly projecting at the angle of a building. Sometimes spelled *coigns*. Fig. 76.
- Raking cornice*. The sloping mouldings of a pediment. Fig. 8.
- Regula*. The block under each triglyph, beneath the *tænia* of the Doric entablature, from which guttæ are pendent. Fig. 8.
- Relief sculpture*. Figures carved or cast in such a way that they are attached to a background. Figs. 148, 161, 181, 208.
- Rib*. An arch of masonry, usually moulded, forming part of the framework on which a vault rests and usually projecting slightly from its under surface. Figs. 49, 51, 54, 59, 63.

- Ribbed vault.* A masonry vault with a relatively thin web supported by ribs. Figs. 49, 51, 54, 59.
- Rinceau.* French, meaning foliage. A band of carved foliate ornament used as a frieze or moulding. Figs. 19, 185, 187.
- Romanesque.* Term applied to the period from approximately 1000 to 1200 in European history and to the art then produced by virtue of its embodiment of some of the principles of Roman art without being actually like it.
- Rustication.* A method of treating masonry walls in which the joints between the stones are recessed while the outer surfaces are left rough or project beyond the joints. Figs. 66, 70, 91, 97.
- Salient buttress.* A strip of masonry applied to the outer face of a wall at a point where the thrusts of a vault are concentrated. Fig. 50.
- Segmental pediment.* A pediment whose upper profile is a section of a circle instead of a gable. Figs. 76, 82, 97.
- Set-back.* A step in the elevation of a skyscraper. Fig. 136.
- Sex-partite vault.* A groined vault, usually with ribs, in which a transverse rib to the crown divides the under surface into six parts or cells. Fig. 51.
- Shaft.* The vertical cylindrical or conoid section of a column between the base and the capital, usually rather slender. Figs. 8, 9.
- Sizing.* The preparation of a surface for the application of paint.
- Soffit.* The under side of an architectural member such as an arch, cornice, architrave, etc.
- Spandrel.* The triangular space formed by the curve of one half of an arch and lines drawn vertically from its springing and horizontally from its crown, Fig. 2; also applied to the horizontal strips between the windows of a skyscraper. Fig. 137.
- Spherical pendentive.* Mathematically, a triangular section of a hemisphere. The inverted concave triangle of masonry placed upon a pier to sustain part of the weight of a dome. Figs. 34, 36.
- Spire.* An elongated rectangular or octagonal pyramid that serves as the termination of a tower. Figs. 57, 111.
- Splaying.* Cutting the sides of an opening in a wall diagonally in such a way that the inner opening is larger than the outer, or conversely. Fig. 45.
- Springing.* The point where an arch begins to curve over. Fig. 2.
- Squinch.* A beam or arch across the angle of a square or polygon, employed to make such a shape more nearly round to serve as the base of a dome. Fig. 49.
- Stele.* A slab of stone or a pillar erected as a memorial. Fig. 163.
- Stilt-block.* See *Pulvin*.

- Stilted arch.* An arch in which the springing is some distance above the impost. Fig. 46.
- String course.* Projecting horizontal course of masonry, often moulded, that marks off one part of an architectural elevation from another. Figs. 70, 76.
- Stud.* Angle beam connecting the vertical and horizontal members of a wooden house frame. Fig. 95.
- Stylobate.* Strictly, the outer part of the top step of a classic temple base; by extension, the topmost of the steps in its entirety. Figs. 8, 9.
- Sweag.* A heavy garland of carved foliage used for architectural ornament. Figs. 77, 84, 97.
- Tania.* The projecting band or fillet that crowns the Doric architrave. Fig. 8.
- Tempera.* A process of painting on a prepared panel with colored pigment mixed with egg.
- Terra-cotta.* Italian, meaning baked earth. A form of pottery, baked in moulds and used for architectural ornament; also as a protective sheath for the steel framework of modern buildings; also employed as a sculptural medium.
- Thrust.* The force exerted horizontally outward by an arch or vault, created by the pressure of the wedge-shaped voussoirs against each other. Fig. 2.
- Tie-rod.* A rod, usually of iron, embedded in the masonry of an arch or vault at the springing and connecting its sides to counteract the lateral thrusts. Figs. 49, 69.
- Tracery.* Ornamental pattern of stone work in the windows of a medieval building. Figs. 58, 59, 88.
- Transept.* The large division of a cruciform plan church at right angles to the axis of the nave; the cross arm. Figs. 30, 40, 56.
- Transverse arches.* The arches across the nave or side aisles of a medieval church, connecting corresponding piers or pilasters with each other. Figs. 46, 47, 49, 59.
- Triforium.* The space between the sloping exterior roof over the side aisle of a church and the vault covering it on the inside; more generally, the story of an interior elevation immediately above the nave arcade. Figs. 41, 42, 44, 45, 49, 51, 59.
- Triglyphs.* The projecting blocks with vertical channels that alternate with the metopes in a Doric frieze. Fig. 8.
- Trumeau.* French, meaning pier. The member that divides a Gothic portal, often decorated with sculpture. Fig. 193.
- Truss.* A framework of wood or metal beams, stiffened by cross braces; used for roofs, bridges, etc.
- Tympanum.* The space bounded by the horizontal and raking cor-

nices of a pediment or enclosed by the lintel and arch of a doorway.

Vault. A roof of masonry, constructed on the arch principle. See *Barrel* and *Groined vaults*. Figs. 21, 54.

Vault web. The relatively thin fabric of stone or masonry that constitutes the expanse of a ribbed vault, supported by the ribs.

Volutes. The scrolls of an Ionic capital; also found in Corinthian and Composite capitals. Figs. 9, 12, 28, 71.

Voussoirs. The truncated wedge-shaped blocks of stone used in an arch or vault. Fig. 2.

Wood-cut. A picture made by pressing on paper an inked block of wood that has been carved in such a way that a design stands out slightly from its surface in the manner of ordinary printing type.

CHRONOLOGICAL TABLE

The greater part of the monuments discussed appear in this table, the numbers following their titles referring to the figures in the text.

| DATE | ARCHITECTURE | SCULPTURE | PAINTING |
|------------------------------|--------------------------------|--------------------------------------|----------------------------------|
| 3000-2500 | | Menkure and His Queen. <i>143</i> | |
| 2200-1400 <i>ca.</i> 1300 | Palace at Knossos. | Relief of Seti I, Abydos. <i>144</i> | |
| 1313-1225 <i>ca.</i> 560 | Medinet-Habu. 5 | Victory of Delos. <i>147</i> | |
| <i>ca.</i> 550 | Basilica, Paestum. <i>14</i> | Hera of Samos. <i>145</i> | |
| <i>ca.</i> 540 | | Perseus and Medusa. <i>148</i> | |
| 400-480 | | Apollo of Melos. <i>146</i> | |
| <i>ca.</i> 480 | | Euthydikos Figure. <i>149</i> | |
| <i>ca.</i> 475 | | Egina Sculpture. <i>150</i> | |
| <i>ca.</i> 460 | | Delphi Charioteer. <i>151</i> | |
| <i>ca.</i> 450 | | Olympia Pediments. <i>152</i> | |
| 450-440 | | Doryphoros. <i>156</i> | |
| 448-443 | | Athena Lemnia. <i>159</i> | |
| 447-432 | Parthenon. <i>15</i> | Parthenon Metopes. <i>160</i> | |
| 442-438 | | Parthenon Frieze. <i>161</i> | |
| <i>ca.</i> 440 | | Pericles. <i>162</i> | Odysseus and Elpenor. <i>230</i> |
| 440-430 | | Parthenon Pediments. <i>157-8</i> | |
| 438-433 | | Nike of Paionios. <i>164</i> | |
| <i>ca.</i> 425 | | Nike Balustrade. <i>165</i> | |
| 421 | Erechtheum. <i>16</i> | Hegeso Stele. <i>163</i> | |
| <i>ca.</i> 410 | | Hermes. <i>166-7</i> | |
| <i>ca.</i> 400 | | Head from Tegea. <i>168</i> | |
| <i>ca.</i> 350 | Lysikrates Monument. <i>17</i> | | |
| 334 | Temple, Philæ. 4 | Apoxyomenos. <i>170</i> | |
| 332-330 | | Aphrodite of Melos. <i>172</i> | |
| 325-300 | | Nike of Samothrace. <i>171</i> | |
| 300-250 | | Dying Gaul. <i>173</i> | |
| <i>ca.</i> 300 | | Pergamon Frieze. <i>174</i> | |
| <i>ca.</i> 241 | | Terme Boxer. <i>177</i> | |
| 180-160 | | Laocoön. <i>176</i> | |
| <i>ca.</i> 50 | | Julius Caesar. <i>178</i> | |
| 20 B.C.-A.D. 50 | Maison Carrée. <i>19</i> | Augustus. <i>179</i> | |
| 16 | | Ara Pacis. <i>180</i> | |
| <i>ca.</i> 15 | | | Theseus. <i>240</i> |
| 9 | | | |
| First Cent. | | | |
| <i>ca.</i> A.D. 50 | Pont du Gard. 27 | Peasant & Cow. <i>175</i> | |
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